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A  
TREATISE

ON

NERVOUS DISORDERS;

INCLUDING

OBSERVATIONS ON DIETETIC AND MEDICINAL  
REMEDIES.

BY THOMAS RICHARDS,  
Surgeon.

"Hoc opus, hoc studium, parvi properemus et ampli,  
Si patriæ volumus, si nobis vivere chari."

"Non ignara mali miseris succurrere disco."

London :  
HURST, CHANCE, AND CO.  
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1829.

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TO

JOHN ABERNETHY, Esq., F. R. S.,

&c. &c. &c.

THE FOLLOWING PAGES ARE RESPECTFULLY INSCRIBED,

IN TESTIMONY

OF HIS TALENT, HIS INTEGRITY, AND HIS INDEPENDENCE,

BY HIS OBEDIENT SERVANT,

THE AUTHOR.



## ADVERTISEMENT.

---

MY object in writing this little volume, is to afford a very numerous class of patients all requisite information as to their maladies; and, at the same time, to place in their hands, in most cases, a decided remedy; in others, certain alleviation and comfort. I have prefixed a description, divested as much as possible of technicalities, of the parts affected in Nervous Disorders, as well as of the machinery,—so to speak—by which those affections are produced: and I have done this, that the patient may see, to the full extent, the evils that will ensue by yielding unre-

sistingly, or, in despair, to the tyranny of these maladies; and the benefits which may be derived by battling sturdily with the enemy.

If I shall find that my suggestions have afforded any relief, and that even one patient has experienced a respite from his sufferings, I shall consider myself amply repaid for the labour with which the execution of my task has been attended.

*Upper Grafton Street, Fitzroy Square,  
November, 1828.*



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## CHAPTER I.

### THE BRAIN AND NERVES.

IN order to convey an accurate idea of the causes and effects of Nervous Disorders, it will be proper to give a brief description of the nerves themselves, of their origin and distribution. I shall, therefore, in this chapter, endeavour to explain, as succinctly as I can, the relation of the brain and its nerves ; so that the reader may see how intimately these minute, but important, organs are incorporated with every part of the living frame.

The brain is a large, soft, pulpy mass, occupying the whole of the inside of the skull, and covered by three membranes. It gives origin to the nerves that supply the organs of sense, and, through the medium of its elongation (the spinal marrow) to all the others ; it is believed to be the receptacle of sensation and the instrument of thought ; but we have no certain or accurate ideas on this subject. As far as regards external or physical sensation, the brain is very

intimately concerned ; and injuries of this organ are amongst the most formidable and fatal of the cases which come under the notice of the surgeon. The modes by which injury is commonly communicated to the brain, are by *concussion* and *compression*. For example : a man receives a violent blow on the head, or falls from a great height, and is deprived of sensation : this is *concussion* or *stunning*; and as soon as the brain has recovered from the shock, sensation returns, and the individual recovers. Another man receives a blow on the head, or falls upon his skull, and becomes senseless. Upon examination, a depression is found in the bone of the skull, and so long as this depression remains pressing on the brain within, so long will the functions of that organ be disturbed. This is *compression*. It is a fact, perhaps, not generally known, that fracture of the skull, an event frequently very dangerous, is, nevertheless, occasionally an antidote to compression and concussion. Its salutary effect may be thus instanced. If a watch fall on its back, the mainspring will break from the concussion : but if it fall on its face, the fracture of the glass obviates the concussion, and the spring is saved. It is just thus with the brain.

But, terrible as these evils are, they would be far more frequent were not the skull so admirably fashioned as to obviate, to a great extent, their several effects. We see a globular box, composed of bone, and containing some of the most delicate



and important parts of the human frame. This box is so formed that, by a certain degree of elasticity, its sides yield in one direction or another, thereby obviating the dangerous effects which would otherwise accrue to its highly susceptible contents, from the violence or pressure of external force. Simple as the mechanism of the skull may appear to the uninitiated, the physiologist knows that it is not so. It is composed of two distinct *tables* or *plates* of bones, between which is interposed a soft spongy substance, called *diploe*, from a Greek word, signifying to double. This complication of structure is made to answer a complication of purposes : namely, the inordinate, and consequently dangerous, vibration of hard substances, and the introduction of sharp instruments. The first is prevented by the fibrous, tough, and elastic *outer table*, assisted by the intermediate spongy substance ; while the inner table, from its dense and even glassy structure, presents a strong barrier to the admission of sharp instruments. On ordinary occasions, perhaps, such a construction as this would be sufficient ; but, in order to increase the strength of the defence, a most beautiful and curious contrivance has been added, by the union of the bones of the skull (eight in number) by *Sutures*. These Sutures, if carefully examined, constitute a very perfect specimen of minute dove-tailing on the outside, while on the inside their edges are merely laid in contact. This difference in their junction,

although apparently accidental, is the result of deliberate contrivance ; for, while the tough and elastic outer table will well bear the roughness of the dovetailing, the inner brittle table would be chipped all to pieces by such a process ; besides, the delicate structure of the brain might be injured by it. The mode in which the Sutures act is, by adding to the strength and lightness of the skull, and by supplying a boundary to fractures. The construction of the skull will bear comparison with that of a wall, the arch of a bridge, or a dome ; its analogy to each of which Mr. Bell has traced and described, in his *Animal Mechanics*, in a very able manner ; while its structure is so formed as to constitute a case, secure on all sides, and strengthened most where its exposure to injury is the greatest.

Why, it has been asked, is not the skull as hard as a helmet ? Because, if it were, the brain would be much more liable to injury from concussion. Thus the man who wears a helmet is more exposed to this evil than one who does not ; and this would be a very dangerous covering to the head were it not ornamented with horse-hair. If the skull were made of materials sufficiently dense and durable to resist the stroke of a sword, or any other weapon, the blow would stun the organs of intellect, and the vibration would affect sensibility. Accordingly, we find that the texture of the bones is not uniform. It is in fact the different structure of these tables, and

the counteracting vibration which ensues from such a structure, that, in conjunction with their elasticity, resist so well the injurious effect of force and pressure.

In a case thus constructed is the brain contained ; and notwithstanding the advanced state of physiological knowledge, the functions of the different parts of the brain are not at all understood. We can demonstrate with extreme accuracy every curious and beautiful part of this remarkable organ ; nay, Spurzheim can unravel its convolutions with a dexterity almost marvellous : yet we know not how to apply the different works of the machine. This, however, we do know—and a very curious fact it is—that the very seat of all sensation should, in a great degree, be itself destitute of sensation. It is now well known that the outer, or, as it is called, the *cortical*, part of the brain is entirely devoid of feeling when in a natural and healthy state. Several ounces of this outer part of the brain have been lost by accident or disease, without any interference with the intellect of the individual, or with the functions of his frame. The present Duke of Manchester met with an accident by which a piece of his skull was kicked away by a horse, with a portion of the brain also. It is only when the *medullary* or innermost portion of the brain (from which indeed the nerves directly derive their origin), is irritated or compressed, that those serious evils ensue which are so detrimental to the

functions of life. Although the outer part of the brain is devoid of feeling, the organ, taken collectively, is most abundantly supplied with blood; indeed so profuse is this supply, that the blood has been supposed to circulate in the brain in a proportion four times greater than in any other part of the body. For this purpose its blood-vessels are large and numerous; and it is necessary that they should be so; for if the blood flows too rapidly through this organ, or if there were not a sufficient number of vessels to contain and circulate it, the intellect becomes disordered, and the ideas are engendered in a rapid, irregular, and hurried manner.

I have said that the nerves arise from the brain, and from its elongated continuation, the spinal marrow. From the brain itself only nine pairs (for these, and all the other nerves, except one or two, arise in *pairs*), have their origin, and they supply the organs of sense, and, by means of a communication which I shall presently explain, the most important of the internal organs. From this communication it will be seen how plentifully the nerves are distributed over the body, and how intimately they communicate with each other, thereby constituting a most complete, and almost interminable sympathy between parts remotely situated from each other.

While the nerves arising from the brain are thus applied, those (thirty pairs in number), which have their origin in the spinal marrow are distributed to



the limbs and to other less noble parts. And here we must pause to admire the beautiful mode in which their source, the spinal marrow, is protected by the spine. The spine is one of the most beautiful parts of the body. Independently of its use as a secure case for the spinal marrow, it is the fulcrum to which many muscles are attached. There is another purpose also, and a very important one, which is effected by the spine, and that is, to defend the brain from the injuries which we have mentioned. This is done by its very curious construction, as well as by its figure. Its construction is so constituted as not merely to contain and defend the spinal marrow from injury, but to allow of very great mobility. To effect the first object, a mere bony cylinder would have been quite enough; but we need not point out how incompatible such a formation would have been to the purposes which the spine really does perform; and in order to perform these purposes well and easily, it is composed of twenty-four bones (*vertebræ*), each bending a little, each joined in a peculiar manner to its fellow, and all yielding in such a degree, as to permit that flexibility which is necessary to the free and frequent motions of the body. Now, it is clear that if the union of these *vertebræ* were bony, there would not be the requisite degree of flexibility in the spine; but to provide for this, there is a layer of elastic gristle, interposed between each bone, permitting it to

approach and play a little in the motions of the body. It is the elasticity of this substance, with that of a strong membrane which passes from one vertebra to another, that enables the spine to bear heavy weights, and to move about so extensively. The form of the spine, somewhat similar to the italic letter *f*, is admirably adapted to receive shocks which might otherwise be prejudicial to the brain and its own contents. By yielding in the direction of its curves, it forms a perfect spring, “admirably adapted,” to use Mr. Bell’s words, “to carry the head without jar or injury of any kind.”

Although the nerves emanate from the brain and spinal marrow, they are, on many accounts, different from these in structure: while the brain and spinal marrow are soft and delicate, the nerves are firm and tough, and exquisitely sensitive. They are enveloped in membranes, which impart to them additional strength and great elasticity, and enable them to pass through the most moveable parts of the body, without being bruised or even compressed, leaving their functions entirely unimpeded. The nerves, it is true, are composed of the same materials as the brain and marrow; but in their progress through the body, this material is disguised by the peculiar structure of their membranes: but (and it is a curious fact), the extremities of the nerves are again reduced to the same delicate, pulpy, soft texture as that of the brain itself.

The nerves are distributed over the body in a manner similar to the blood vessels, and there are but few structures of the body that are not influenced by their action. Their sensibility, or rather their power of imparting sensation, depends entirely upon the perfection of their functions, and upon their direct and unobstructed continuity with the brain; for, if the trunk of a nerve be divided, the sensation of the parts which is supplied with feeling will be lost, and the power of the will over the limb, to a certain extent, destroyed; but the mischief will extend no further than the loss of feeling, the nutrition and growth of the parts continue, and the action of those parts, over which the will has no control (as the muscular motion of the arteries) remains uninjured.

But although the nerves be thus distributed, like the blood-vessels, there is a peculiarity in their action, which the blood-vessels do not possess. If arterial blood be sent to a part, it matters not by what artery it is sent; if it be *arterial*, or *oxydized* blood, the purpose is effectually answered. It is not so with the nerves; for each nerve, or rather *set* of nerves, has its own organ to supply, —its own peculiar function to perform. This peculiar organization, however, is more particularly situated in the extremity or termination of the nerve, for the mere trunk of a nerve is not endowed with any peculiar influence. Thus, if we wound the trunk of any nerve, we shall

always experience the same result : there will be an undefinable sensation of pain, and convulsions or spasms of the muscles of the part ; but the particular sense or organ, to which that nerve is destined to convey its influence, will not be injured.

Researches in comparative anatomy, where our range is so extensive, prove to us, that the particular habits of all classes of animals have been duly and most diligently considered by their Almighty Maker, in the size and distribution of their nerves.

The nerves of an animal are in strict proportion to the size of his body, and they bear in their distribution and offices, a close and careful relation to his necessities, and to the perfection of those organs by which these necessities are supplied. If the procuring of his food depend upon the acuteness or power of the organ of smell ; or upon the ears, or the eyes, or the tongue, or even upon the bill ; an additional supply of nerves is provided, or a peculiar apparatus of nerves is bestowed for the purpose of contributing to this want. There is another provision connected with the nerves, which will strike the attentive observer very forcibly. Although in every instance, where the use of the organ is not absolutely essential to life, we have a complete control over that organ, or nearly so ; yet, where the vital function depends upon a constant and perfect action of any organ, we have no control whatever over that organ. Thus, we may close the eye, or the ear, or the nose,

and so shut out the senses which these organs supply: but we cannot suspend the action of the heart, or of the lungs, or of the curious apparatus by which the essential process of respiration is performed. These are organs whose perpetual motion is absolutely necessary to the grand work of existence; and *therefore*, nature has guarded these functions from interruption or suspension, by making them entirely independent of the will, and less immediately dependent upon the functions of the brain.

And here a new subject of wonder and admiration opens before us, as we proceed to consider the manner in which these vital organs are supplied with nervous energy, and connected with other parts of the frame by means of these well-adapted nerves.

The nerves which are sent to the vital or internal parts, are a distinct class of themselves, and are formed by contributions from some of the nerves of the senses. This class has been called the *Ganglionic System*, from the existence of numerous *Ganglia* throughout the whole extent of its course. These *Ganglia* are a sort of net work, or extensive union of several nerves, bound together by membranes, and appearing, in some parts, like a knot; in others, like a diffused, pulpy swelling. It is supposed that a *Ganglion* answers two purposes; namely, the more perfect and extensive propagation of nervous energy, by affording a medium of communication with different nerves; and the imparting of additional



energy to the nerves which form it. The commencement of this system is in the brain, whence it issues in a complete and tangible form, under the appropriate name of "the Great Sympathetic Nerve." No sooner has it left the brain, than it immediately begins to add to its powers by the formation of Ganglia, and by its consequent union with the nerves of the different organs in the neck, and of the parts adjacent. In its progress downwards, it sends branches of communication to the heart, lungs, and stomach; and after forming a large Ganglion, immediately under the latter organ, proceeds to supply the bowels, and all the internal organs, with their large proportion of nervous influence, communicating in its course most freely with the nerves from all parts of the body.

From the distribution of this very important nerve, we are now enabled to account for the extensive and extraordinary sympathy which exists between parts so remote from each other, and, apparently, unconnected by any reciprocity of function. Above all will it shew us the influence which the mind has over the body, and how the different senses are distorted and deranged from a corresponding derangement of the internal organs. Here is a direct, continuous, and most sensitive sympathy between the senses and all parts of the body; and there are few of us who have not, at some period or other of our lives, experienced a proof of its influence.

Let me revert again to the fact of these nerves being independent of the will; and of their enabling the different organs, which they supply, to continue their functions without suspension or interruption. When I say that the will has no power over these nerves, I mean, that a person cannot control the actions of the vital organs, as he can those of his arms, or legs, or hands, &c., that is, while he is in health. But a very little observation shews us, that certain passions of the mind, or irregularities of living, and several other causes, have an especial and powerful influence over these organs, as far as a *derangement* merely of their functions is concerned; thus establishing what Mr. Charles Bell calls “a reciprocal influence between the nerves and the vital organs.” We all know that violent rage, continued grief, or anxiety, deep study, and even great joy, very materially interfere with the healthy actions of the frame; and, if continued, eventually affect the whole nervous system. “We must be sensible,” observes Mr. Bell, “how often the exercise of the passions, and even the images which occupy the mind, produce physical changes on the body.” This, indeed, is the *rationale* of Nervous Disorders, and I shall now proceed to show the effects of physical sympathy on the frame, and to illustrate it by appropriate examples; concluding the present chapter with the following admirable observation from Boyle. “The works of God are so worthy of their author,



that, beside the impresses of his wisdom and goodness, left, as it were, upon their surfaces, there are a great many more curious and excellent tokens and effects of Divine Artifice, in the hidden and innermost recesses of them. And these are not to be discovered by the slight glances of the lazy and the ignorant, but require the most attentive and prying inspection of curious and well-qualified minds."

## CHAP. II.

### ON PHYSICAL SYMPATHY.

I HAVE shown the reader how minutely the nerves traverse the body ; and how copiously all the internal organs are supplied with nervous energy. I have, also, pointed out the close and continuous connection that exists between the organs of sense, the external parts of the body, and all the important viscera through the medium of that nerve which is emphatically called "*The Great Sympathetic Nerve.*" The reader has learnt how this extraordinary nerve, after communicating freely with the nerves of the upper part of the body, sends branches to the throat, the heart, the lungs, the diaphragm (midriff) and other muscles of respiration ; the stomach, the liver, and the other organs of the belly, thereby supplying a vast extent of nervous power and communication ; and, having learnt this, we can be at no loss to account for those strange and uncomfortable sensations, which, in Nervous

Disorders, so extensively pervade the body. By paying even a slight degree of attention to this interesting subject, the meanest capacity may readily perceive the Physical Sympathy which exists between the different parts of the frame, however distant they may be from each other; and more particularly the manner in which the various organs of sense are affected from a derangement of the stomach and its accessory organs. It will be necessary to bear all this in mind, in order to understand details which might otherwise appear incongruous and improbable; and with this index before him, the reader will readily comprehend all that may be said with regard to those distressing and complicated maladies, which are colloquially termed *Nervous*.

In order, however, to render the subject still more intelligible, as well as to imbue it with a greater degree of interest, I shall now proceed to offer some observations on what is usually called *Sympathy*, accompanying such observations with pertinent illustrations.

Sympathy is an action or sensation produced in one part, in consequence of an impression made upon another; and, after what has been said, it is clear, that sympathy is conveyed through the medium of the nerves, which are so beautifully distributed over the whole body, so that the different organs, with which they communicate, become more or less affected. Next to the brain the stomach is

most extensive in its sympathies ; it is, in fact, the centre of sympathy. “ If,” to borrow the words of a late amusing writer, “ the most minute fibre of the human frame be hurt, intelligence of the injury instantaneously arrives, and the stomach is disturbed in proportion to the importance of the member, and the degree in which it is offended :”\* and when the stomach itself is primarily affected, the whole system will more or less participate in its derangement. This, therefore, clearly establishes the stomach as an organ of extensive sympathy, and in this character, we shall now proceed to consider it.

We have all of us experienced the sympathy between the mind and the stomach, when any thing has occurred which particularly affects our feelings. I have known sudden joy instantly take away the appetite, and excite the bowels to action ; and I have known the following effect produced by grief. A gentleman with a very bad digestion, irregular habits, and obstinate state of bowels, received some very unpleasant intelligence, and was soon after seized with a violent relaxation of his bowels. In this condition he sent for me, and I found him a good deal reduced, and suffering very considerably from the effects of the malady. His situation was sufficiently embarrassing, as the intelligence which he had received, rendered necessary his immediate departure from town ; so that his anxiety to accom-

\* Kitchener's Peptic Precepts, 194.

plish an impossible object, no doubt aggravated his complaint. On the evening of the same day, he received another communication, countermanding his departure, and removing the unpleasant effects of the previous intelligence. His diarrhœa which had stubbornly resisted the usual remedies, now left him as suddenly as it had attacked him, and he got quite well.

The stomach sympathises also with the general wants of the machine, producing the sensations of hunger and thirst. Here we may pause to admire the wisdom of our Creator in thus furnishing us with a monitor to apprise us of the necessity of repairing these wants; so that the important process of feeding is not left to our own reason, but to an instinct, which is much more safe and sure in its operation; and while we are induced to take in food and drink, to remove the disagreeable impressions occasioned by hunger and thirst, we are, at the same time, and without any premeditated intention on our part, furnishing the machine with a proper supply of material to repair the wear and tear of its operations. It has been supposed, that the sensation of hunger is produced by the stimulus of the Gastric juice; which, being secreted, and having nothing to act upon, irritates the stomach, and causes the sensation. But we know that some animals are in a torpid state during the winter, and that at this time they experience no hunger, for as there is no waste,



so is there no necessity for any repair. Again, a person labouring under disease, is unable to take food, but as soon as the disease leaves him, his appetite becomes ravenous. This excessive hunger, however, is not of long duration, as it lasts only until the constitution has regained the loss which it had sustained by the sickness. These are sufficient proofs that hunger and thirst are produced by sympathy, and not by the irritation of the Gastric juice.

There is a very remarkable sympathy between the Vascular System and the stomach, as has been proved by experiment. Dr. Haighton threw an emetic into the circulation of a dog, and found that vomiting was produced in as short a time as when taken into the stomach itself. Some physiologists assert, that the blood-vessels are only intended to carry blood; and that any other fluid introduced into them, will excite disorder in the system: but water has been injected into the vessels, both here and in France, without the production of any bad effect. To prove this fact more distinctly, Dr. Haighton injected a cathartic in the same manner as he did the emetic; and it affected the bowels in the same time as it would have acted, if administered by the mouth.

In the instance which we have adduced, the stomach has been only affected in a secondary degree, but we shall now show that it may receive

primary impressions through the means of sympathy. If we take cordials into the stomach, they communicate a pleasurable sensation, and quicken the circulation, the vascular system being sensibly excited by them. Bark and steel, with some other medicines, are not to be detected in the mass of blood by the ordinary chemical tests. These medicines, therefore, must affect the vascular system sympathetically, or else be so changed in their properties by digestion, as to lose their primitive characters.

Irritability, or other derangement of the stomach and bowels, is the cause of very extensive and distressing sympathy; which may be readily inferred from the capacity and extent of the intestinal canal, and the bountiful manner in which it is supplied with nerves. When the stomach is in a sound state, and digestion properly performed, the spirits are buoyant, the mind is active, and the body light and comfortable; but when this organ is out of order, a contrary state of things occurs. Languor, debility, both of mind and body, disinclination to exert our faculties, with melancholy, disturbed rest, and disagreeable dreams, are the inevitable consequences. We have already seen, that the grateful and exhilarating effects of cordials are produced by sympathy; in like manner are the deleterious results of narcotic poisons occasioned. The stomach is first affected, then the brain, through the medium of the nerves,



and then the whole frame by the same channel of communication. Fever, delirium, and violent convulsions have been produced by a pin sticking in the coats of the stomach; and we all know what a surprising variety of symptoms are caused by the irritation of worms, either in the stomach or the bowels. Convulsions in children are often caused by some irritating substances in the stomach or bowels; as indigested food, or even too large a quantity of their proper aliment; and convulsions from such a cause have even proved fatal. In adults the same evils have been produced, and by the same causes; and it is a common thing for head-ache, confused vision, and transient giddiness, to depend either upon indigested food in the stomach, or an accumulation of fæces in the bowels.

This subject is so interesting, and concerns us all so intimately, that I shall venture to prosecute it a little further. Every dyspeptic patient knows how greatly the head and the heart are affected by wind, or any other noxious matter in the stomach. The distressing head-ache, palpitations of the heart, difficulty of breathing, and unpleasant flushings which ensue: and few of us are unacquainted with the effects of drunkenness, to the consideration of which, however, I shall direct the reader's attention more particularly in another chapter. I am acquainted with a lady, who, being of a very nervous, sensitive temperament, is exceedingly troubled with

attacks of indigestion, the approach of which is always indicated by the temporary loss of sight, leaving a most distressing head-ache and nausea. Inflammation of the eyes is frequently caused by an irritable stomach; so are several other external inflammations. Vomiting is to be excited by irritating the *fauces* or throat; while nausea diminishes the strength and volume of the pulse, excites perspiration, and sometimes increases the flow of the saliva and urine. The most remarkable effects of sympathy, which the ingenuity of modern times has discovered, is that produced by the application of Croton oil. If the tongue be only touched with it, the most violent action of the bowels immediately ensues.\*

The sympathy between the stomach and liver is, as we all know, very great, from the proximity of these organs, and the consequent free communication of their nerves. Perhaps there never was an instance where the liver was extensively deranged, without an accompanying derangement of the stomach: the pain so generally felt under the blade bone in "*Liver Complaints*," is caused by direct physical sympathy. Dr. Whyte, who wrote on this subject about the middle of the last century, mentions having twice seen, in cases of suppuration of the liver, the patients affected with a numbness

\* Boyle mentions the cases of several individuals who were purged by *smelling* to a carthartic medicine. See his *Usefulness of Experimental Philosophy*, part 2nd, p. 242.

and debility of the right arm, thigh and leg—of course through the medium of the nerves.

Affections of the kidneys, and their excretory ducts (the *ureters*), frequently occasion considerable sympathetic disturbance, as nausea, vomiting, constipation of the bowels, and fever. Gravel, either in the kidney or in the ureter, communicates great irritation to the bladder, and frequently causes inflammation in the urethra. If one kidney be inflamed, the functions of the other will be diminished; and when a stone is passing through the ureter into the bladder, the *testis* of the same side will often become hard, swelled, and painfully drawn upwards. In renal calculus there is not only pain in the middle of the thigh, but that part is actually sore to the touch; thus proving that, although in this case the sympathy originates in the kidney, it positively causes a local affection in the thigh, dependant, probably, upon some vascular fulness. The same fact will apply to the pain which is felt in the shoulder, in consequence of a diseased liver. See Parry's Elements of Pathology, &c., 263.

We have already seen, by the stomach and liver, that organs which are very near each other, although performing different functions, are strongly influenced by sympathy. This is also the case with the bladder and rectum. All irritating disorders of the one, will correspondingly affect the other; and if the malady be severe, the stomach and the whole nervous system will surely sym-

pathise, as we see daily in bad cases of piles, as well as in aggravated forms of inflamed Prostrate Glands. But the most remarkable instance of sympathy connected with these organs, is the curious burning sensation, which is felt, after making water, in the *glans penis*, when there is a stone in the bladder. There is no pain, generally, in any part of the urethra, but a burning sensation in the glans, just as if a hot needle were pressed upon it.

It would not be proper here to enter into a detailed examination of those important changes which take place in both sexes on their accession to puberty. This, indeed, is one of the most interesting subjects which can possibly engage the attention of the physiologist; and, in prosecuting it diligently and closely, he will perceive some of the most beautiful examples of Physical Sympathy. The physical change is first produced, and as the different organs become more fully developed, that moral alteration is effected, which is evinced in every word, look, and action, of the new being.

“Nec minus notum est,” observes the great Harvey, “quanta virgini alteratio contingat, increscente primum et tepefacto utero: pubescit nempe, coloratior evadit, mammæ protuberant, pulchrior vultus renidit, splendent oculi, vox canora, incessus gestus, sermo, omnia decora fiunt:”

As sympathy is so extensively propagated by the developement of these important organs, so is it always intimately connected with them afterwards,



more especially in females. To prove this we need only allude to the disturbance which is created in the general system of some females at the time of menstruation ; and more especially the strong sympathy that exists between the uterus and the breasts. We will go a step farther, and adduce the state of pregnancy in support of our position, when a multitude of very curious sympathetic affections are developed. And lastly, we shall presently observe how far the uterus is affected, and how far other parts of the body sympathise with it in those nervous affections, which are called hysterical.\*

I have thus cursorily described the sympathy connected with the different internal organs : there are some few interesting particulars relating to the senses, which I shall now proceed to enumerate.

It must be evident to all who are at all conversant with the influence of the mind over the body, that the operation of the senses must conduce very materially to the propagation of sympathy. It is through the medium of the senses that various mental emotions, such as surprise, suspense, and vexation, will produce or renew some inflammatory affections—as gout and rheumatism, and other ma-

\* With regard to the extreme inconvenience which some females suffer from menstruation, I have found a few drops of laudanum of great use in allaying the irritation, and assuaging the pain. Ten drops of laudanum in a wine-glass full of camphor julep, will usually afford the desired relief, without at all interfering with the function.

ladies, as jaundice, diarrhœa, and dyspepsia. So, through the same medium, anger will flush the face, and produce bleeding from the nose; and incipient fever has been known to vanish in a few seconds by the mere operation of fear.

We are all familiar with sneezing, which may be occasioned either by some pungent odour applied to the nose, or to a bright light falling suddenly upon the eye. Fear or sudden terror will cause the blood to recede from the superficial vessels, and make the countenance fall. Hiccup is often stopped by terror, surprise, or any other strong and sudden emotion; while the sight or smell of grateful food, causes a copious flow of saliva in the mouth of a hungry man; or, in common parlance, makes the mouth water; so do the sight and smell of acids and fruit, or even the recollection of them. The recollection, also, of unpleasant substances, will have a similar effect.

This increase of secretions from mental causes is very curious; and may be instanced by some very remarkable examples. Every one who possesses a nervous, irritable, fidgetty disposition, knows how the secretion of urine is augmented by anxiety, worry, and vexation. Tears are produced by joy, sorrow, admiration, and bodily pain. "Parental affection," says Dr. Parry,\* "will, according to very

\* Elements of Pathology and Therapeutics, 383-4.

common experience, occasion a copious secretion of milk ; while the proximity and dislike of a strange milker, will cause the milk, as the phrase is, not to come down. In the human race I have known a lady, who had long ceased to nurse, in whose breasts a copious secretion of milk was produced by hearing any child cry."

"Various mental affections occasion sweating ; and in one patient the mere recollection of ham, cheese, and certain other kinds of food, which he much liked, but which disagreed with his stomach, immediately produced above his head a degree of sweating, which could be compared to nothing, but his having dipped his whole head in water."

"Great surprise will often bring on a violent fit of bile. The same cause frequently occasions diarrhœa. An increased secretion of urine is a common effect of fear, and other mental emotions in man and other animals."

Muci, è membranà genitalium utriusque sexûs propria, secretionem copiosam gignit libido.

There is one organ which (so to speak) is an extensive *conductor* of sympathy—and this is the skin. When we consider the structure, which is somewhat elaborate ; the use, which is very important ; and the extent of this organ, we shall be at no loss to comprehend its sympathetic qualities. With the brain and the stomach, it possesses quick



and powerful sympathy, which is proved by blushing ; and paleness, as concerned with the brain ; and by perspiration, from the effect of diaphoretic medicines ; by certain eruptions, particularly those caused by eating muscles, and other indigestible food, and by certain uneasy sensations, especially those of itching and tingling, caused in the same way, or, in some constitutions, by taking opium and other narcotics. There is this, also, to be considered, with regard to the skin—namely, that it is a continuation of the membrane which lines the different internal cavities ; as are also its differently-reflected laminæ. For instance, the membrane lining the nose, mouth, throat, &c., is directly connected with the external skin : and this will account for many affections of external organs, and will explain how much their cure depends upon a healthy state of the stomach and bowels. This doctrine of *continuous membranes* is extremely interesting, and exceedingly useful as a guide to the practitioner in the treatment of local disorders : it is one of those leading practical points which he should always bear diligently in his mind.

The skin, independently of its uses as the organ of touch, has other important functions to perform. These functions are chiefly subservient to the abstraction of superfluous heat from the body ; for, according to the activity of the circulation is the

heat of the body ; and according to the activity of the circulation, is the quantity of perspiration in health. By this perspiration, and the change of the perspired fluid into vapour, the heat of the body is carried off. In a cold atmosphere, perspiration ceasing, the vital heat is retained; in a warmer temperature, the perspiring action being excited, the heat of the body is carried off. But the more important functions of the skin is to be contemplated in its effect on the general activity of the vascular system, and in the vicarious action which takes place between it and the internal organs. The similarity of functions performed in the lungs and by the skin, lead us to attend to the injury of the former by the impression of cold on the surface, and by the checking of perspiration. The fact, also, that perspiration is altered in degree by the progress of digestion, induce me to attend to the many occasions in which we see disorders of the viscera—particularly of the stomach and liver—affecting the skin. The imperfection of the function of perspiration, when the stomach and bowels are deranged, induce us not only to remark the symptoms of internal diseases, as indicated by the state of the skin, but to take the means of exciting the latter by blisters, &c., as a remedy for them. In the same manner will the secretion from the kidneys be affected by the condition of the skin, and of the perspiring action ; in short, there is a great and continual, and most

important sympathy between all the functions of the body and the functions of the skin.\*

One very distressing affection connected with the skin I must mention, before I bring these cursory observations to a close. Nervous females often suffer from a determination of blood to the skin of the face, and sometimes the greater part of the body, which is very different from blushing. It is accompanied with, and probably produced by, an increased action of the heart, being attended with a flushing and great heat of the skin, and in an instant, succeeded by perspiration, after which the skin becomes cold, and the action of the heart is diminished, often in an undue degree—occasionally, even so far as to induce fainting. All the steps of the process are performed in a very rapid manner, leaving the patient much exhausted. In some parts of the country this affection is denominated “*Hot Blooms*.”

I have now adduced as many examples as are necessary to convince the reader of the great extent to which sympathy may be propagated; in conclusion, however, I would remind him of the excessive constitutional disturbance which accompanies, or

\* The French and Italians attribute very great importance to the profuse perspiration of the feet. In a late number of the Medical and Physical Journal, are some extracts from a paper on this subject, by which it seems that many serious maladies are prevented by this process, and many terrible evils entailed by its suppression. The subject is certainly worthy of attention—particularly in warm climates.

ensues from any local mischief, whether that mischief be the result of disease or accident. If any organ be affected with inflammation, there is more or less fever attendant upon the evil. If any limb be fractured or much injured, fever to a certain degree will surely ensue; and, occasionally, surgical operations are followed by so much nervous irritation, as to destroy the patient. A very curious and remarkable exemplification of the physical effects of sympathy, has occurred after an extraordinary and hazardous operation—amputation at the hip joint, for instance. More than one case of this kind has been followed by abscess in the liver, and other extensive glandular derangement. How these changes are effected we cannot precisely tell; but in medicine, as well as in natural philosophy, it is often sufficient, at least for the purposes of practice, to know the certainty of some particular phenomena, without being able exactly to account for their occurrence. “Sufficit,” as Cicero has observed, “si quid fiat intelligamus, etiam si quomodo quidque fiat ignoremus.”

## CHAP. III.

### CAUSES OF NERVOUS DISORDERS.

THERE is no class of disorders more painful to the patient, or more perplexing to the practitioner, than that which comprehends those maladies which are colloquially called *nervous*. These disorders have been variously defined ; but without entering into a discussion on the technical jargon of the schools, it may be observed, that those disorders only are to be termed nervous, which consist originally of a morbid state of sensation, unattended by any decided alteration of structure.

All the organs of the body may be perfectly sound, although their functions may be irregular and disturbed, causing, as we shall presently see, a distressing degree of nervous derangement. It is of the greatest importance to bear this distinction in mind, both as influencing the means of cure, and as indicating the prognosis of the disease ; for it must be sufficiently evident, even to the most superficial



observer, that if there be an absolute alteration of structure in any internal organ, as the liver, stomach, lungs, &c., the practitioner's attention must first be directed to the amendment of such organ, before he can hope to cure, or even to alleviate, those symptoms which he, or his patient, may consider nervous. Besides, he will not have so good a probability of success in his treatment, if the root of the malady be in a diseased viscus; for well do we know that mischief of this description is rarely to be eradicated.

With regard to nervous affections, then, the first point to be considered and ascertained is, whether they are *symptomatic*, or *idiopathic*: in other words, whether they be dependent upon some previous and still existing *structural* disease, or whether they have originated without such previous cause. It is to those disorders, which may be classed under the latter of these denominations, that I shall mainly direct the reader's attention, intending to touch only incidentally upon the others; and I shall pursue the following order in treating of them. I shall first point out the constitution, temperament, and condition, most liable to nervous affections; then the most usual causes that induce them; then the symptoms; and, the termination; concluding with the best method of cure.

First, then, as to the predisposing constitution, temperament, and condition.

It is a curious circumstance, and must afford ample food for reflection, that those persons whose mental endowments are the most rich and abundant, and whose feelings are the most acute and refined, are more particularly exposed than others to nervous affections. In them the nervous temperament, as it has been called, is characterized by an extraordinary degree of sensibility, and by a preponderance of quick and irritable feeling; so that those impressions which, in a constitution better adjusted, would produce only pleasure and gratification, occasion in them discomfort and pain. The evils attendant upon this peculiarity of constitution are considerably fostered and augmented by a constant habit of self-indulgence; by the indolence, luxury, and excesses, moral as well as physical, too often resulting from wealth and refinement; by the incalculable mischief arising from certain sedentary and recluse occupations; and by an exemption from those more rough and toilsome employments, which the lower classes are compelled to resort to.

We have recently had several painful examples of the terrible effects of these dreadful evils, arising from too great a degree of mental labour, super-added to a temperament excessively sensitive. The fate of Mr. Whitbread, of Sir Samuel Romilly, of the Marquess of Londonderry, and of poor Henry Neele, afford a sad lesson as regards the weakness of man's strength, even when standing on the very



pinnacle of mundane power and adulation: and at this very moment, is England mourning over the loss—the virtual loss of one—and the premature death of another—of two of her most distinguished statesmen, from the same unhappy cause. This wear and tear of the mind is the source of much frightful mischief; and this fact is powerfully exemplified in a country like this, where man's relations with the world around him are multiplied beyond example, in consequence of the intense interest attached to politics, religion, commerce, literature, science, and the arts; where the temporal concerns of a vast proportion of the population are in a state of perpetual vacillation; where spiritual affairs excite great anxiety in the minds of many; and where, in short, every good and every evil arising from a highly cultivated state of society, are displayed on a large and on an interesting scale.\* Persons in the higher walks of life are continually subjected to the influence of this mental tyranny, but more especially at those very periods, when every feeling of their souls is excited to excessive vividness; and when all their sensitive faculties are in a state of the most painful tension. The patriot, struggling to free his country from bondage and oppression; the minister, labouring to carry into effect the beneficial projects which his teeming brain has engendered; the philo-

\* See Dr James Johnson's excellent work on Morbid Sensibility of the Stomach and Bowels.

sopher, prosecuting those discoveries which has placed the very elements at the command of mortals, and rendered them subservient, almost, to babes and sucklings; the poet, exercising those faculties which have been termed "heaven-born"; and which, no matter what may be the worldly condition of their professor, elevate him far above his species, and ensure to him raptures which none beside can taste; the scholar, poring with laborious research and unshrinking perseverance over hidden and abstruse learning; the lover, panting for the presence of his beloved mistress; and the love-lorn maiden, pining in hopeless tenderness for her faithless swain, are all, more or less, subjected to these evils; while the peasant, the labourer, and the "base artificer," strangers alike to refinement and its enervating luxuries, follow their several avocations, uncursed by the cares, and untouched by the sufferings of their wealthy masters.

As a general rule, subject, however, to many exceptions, women are more exposed to nervous attacks than men; and their delicate structure, their sedentary habits, and quick sensitive dispositions, would lead us, *à priori*, to infer that this would be the case. Women are far more susceptible of impressions, moral as well as physical, than men. Their avocations, their duties, even their very pastimes and pleasures are particularly favourable to the inducing of nervous affections: and it is sad to

see how many of England's fairest flowers are yearly nipt and faded by the withering effects of that worldly-worshipped tyrant,—Fashion. The artificial existence, which a young lady of rank is now compelled to assume, in accordance with established usages, however advantageously it may be thought to heighten her charms,\* most inevitably entail upon her evils, which, at some future period are calculated, most certainly, to embitter that existence. The mode in which her education is conducted, is in most instances calculated rather to constitute a superficial state of acquirements, than a sound and extensive system of mental cultivation, or corporal strength. After this, she lives in strict obedience to rule; and when, at length, she becomes fully and freely involved in the vortex of the busy “world,” late hours, crowded and consequently heated rooms, and an incessant succession of alternate excitement and depression, complete the bad work, debilitate her frame, worry and irritate her

\* This is an erroneous supposition. The artificial methods practised to improve the figures and forms of our beautiful countrywomen, are more frequently detrimental than beneficial; and, very frequently, great mischief is done to the constitution, more particularly by the practice of *tight-lacing*—an absurd, pernicious, and very foolish custom. We all know that in Circassia, and other Eastern countries, which are famed for the grace and beauty of their women, the most loose and unincumbered dresses are used. I wish the “fair daughters of merry England” would adopt a similarity of costume, or, at all events, eschew the preposterous extremes which are now so generally in *fashion*.

mind, and render her particularly liable to all the varied ills "that flesh is heir to."

We have incidentally mentioned that individuals who indulge in sedentary occupations, become especial victims to Nervous Disorders. Man being an animal destined for an active and useful life, and amply provided with organs for that purpose, Providence has ordained that sloth and inactivity shall bring with them their own curse and punishment. The industrious husbandman whose wants are few, and, consequently, easily supplied; who rises early, and goes to rest early, and passes nearly the whole of his life in the open air, engaged in active exercise, inhaling a pure and salubrious atmosphere, and partaking moderately of the bounties of Providence, without indulging in luxurious excesses, enjoys health of body and tranquillity of mind, and dies, often, at the utmost limit allotted to humanity. To such a person the evils of which we are speaking are utterly unknown; while to those of opposite habits they are scarcely ever absent. These, lured by the enchantments of science or literature, are constantly exposed to the mischief which is inevitably caused by the workings of an active mind, operating upon an inactive body.\* There ought

\* A most mischievous habit which *reading* men at college and elsewhere generally so freely indulge in, is that of drinking inordinate quantities of tea, for the purpose of exciting their faculties, or rather of keeping them vigilant. The combined evils

always to be a nice and well-adjusted balance between the operations of the mind and those of the body. Strength of body, with elasticity of fibre, and the due action of the various functions of the frame, as well as of the mind, are decidedly incompatible with sedentary habits: man was not created to lead a supine and an indolent life; nor were the numerous organs and attributes which he possesses, bestowed upon him for the purpose of being wasted in sloth and inactivity. In sedentary people of the description I have last mentioned, there are two principal causes constantly operating to debilitate the constitution,—the one acting more immediately on the *animal*, the other on the *mental* frame; and as I have already shown how wonderful a sympathy exists between them both, it is easy to conceive that these two causes, acting conjointly and continually, greatly conspire to the production of the disorders in question.

From what has been said, it might be inferred that the lower orders are entirely exempted from the affliction of Nervous Disorders, but, strictly speaking, the fact is not so; and this constitutes one exception to the general rule. While luxury, corporal inactivity, and excessive sensibility, introduce

arising from thus trifling with the stomach, and, at the same time, leading very studious and sedentary lives, derange the health of the student, and very frequently, render him hypochondriac for ever.



the malady into the circles of the rich and studious; so, hard labour, scanty and unwholesome diet, added to the wretched condition of their dwellings, and to the anxiety attendant upon poverty and wretchedness, will occasionally obtrude it into the hovels of the poor. In these instances, however, the disease more frequently generates into typhus, rarely assuming that distressing form, which we ought properly to characterize as nervous.

We now come to the CAUSES of Nervous Disorders—a theme as copious as the consequences which they produce, and one equally difficult of management.

In most diseases we are enabled distinctly to trace their cause and origin. Peculiarity of constitution, hereditary entailment, exposure to cold, contagion, analogies to be deduced from knowledge previously gained, from appearances after death, and several other circumstances, constitute a sufficient guide in many cases, whereby we are enabled correctly to trace the cause, origin, and accession of disease: but in Nervous Disorders we are often sorely puzzled to account for the actual cause of the mischief. We know, beforehand, that persons of peculiar temperaments, are *more* subject than others to such disorders: but this is no sure and unerring guide, because many individuals possessing these predisposing temperaments, are perfectly free from these complicated evils; while others, who have, as far



as we can see, no one particle of such peculiarity in their composition, become martyrs to the malady. In these distressing cases, appearances after death afford, frequently, no satisfactory explanation of the causes of the malady, however plainly they may point out the consequences; and all that the reflecting practitioner can do, is to note carefully the symptoms which arise, to meet them as they rise, and to mitigate the various sufferings as far as he can.

Although in *all* cases we cannot distinctly make out the *cause*: yet we know very well that there are certain parts of the body which are, more or less, invariably affected in Nervous Disorders; and these are, the brain, the stomach, and the bowels. The late Dr. Parry, of Bath, a physician of extensive knowledge and great powers of observation, in his learned work on Pathology and Therapeutics, has, I think, clearly proved that in all cases of Nervous Disorders, there is an excessive determination of blood to the head, originating in a morbid irritability of the heart. Indeed, he positively assumes that “an excessive impetus of blood, acting on the brain, is the cause of the phenomena of Nervous Disorders.” It is very true, that if this determination does exist, it will certainly dispose the brain more readily to receive impressions, and to be more easily acted upon by the various causes of mental and bodily irritation—provided, however, those

causes do not go to the extent of producing actual disease in the brain itself, in which case other symptoms will be established, differing altogether from those which we have to consider. There is this also to be thought of. The effect, namely, of that close sympathy which exists between the brain and the Sanguiferous System; and especially as relates to the re-action which is carried on between them. For example: suppose that from indolence or indigestion, or any other cause, the heart has acquired an excessive morbid irritability. In this case, any impression communicated to it from the brain—as sudden terror, joy, sorrow, or any other emotion, may excite in it inordinate action, as may be discovered by the acceleration of the pulse. This inordinate action, by sending the blood with increased violence to the brain, already too abundantly supplied with blood, may cause the brain to react on various other parts, but especially on the heart and Sanguiferous system generally, thus producing the “phenomena of Nervous Disorders.”

A curious fact, illustrative of Dr. Parry's position is, that excessive sensibility with regard to certain external impressions—as head-ache, giddiness, spasmodic shortness of breath, hiccup, convulsions, and even delirium, may be for a while wholly removed, or, at all events, considerably mitigated, by compressing the carotid arteries, and thus intercepting, or diminishing, the flow of blood to the brain.

These arteries, moreover, are in a state of excessive action in persons of a nervous temperament, and this excess of action is always commensurate with a greater or less degree of nervous irritation. In these disorders, also, the head is usually much hotter than in a state of health, and the face is often preternaturally red.\*

Taking this view of the cause of Nervous Disorders, it is by no means difficult to account for its production, whether we regard the existing symptoms, or the general termination of the disorders themselves. The causes which generally produce these maladies may be thus cursorily enumerated: excessive mental or bodily exertion, anxiety, late hours, hot rooms, long continued attention to a particular object, confinement, sedentary occupations, indulgence in eating and drinking, and in those violent passions and emotions which shake the soul. These affections may be divided into two classes—moral and physical; the moral acting directly upon the brain, and indirectly upon the system at large—the physical acting directly on the functions of the frame, and indirectly or eventually, on the brain.

As regards the *moral* causes, it would be incompatible with my present purpose to enter into a lengthened discussion on their *modus operandi*, even were the performance of such a plan possible. We

\* Parry's Elements of Pathology and Therapeutics, p. 298.

may observe, however, that they all seem to act immediately upon the brain, by increasing the circulation of the blood within it. Some of the mental affections, however, are more apt to produce these evils than others ; but there are none of them, which when indulged in to excess, may not prove hurtful. Grief and anxiety are productive of much mischief ; so, also, are losses and disappointments, which frequently induce a state of mind that leads to long and obstinate hypochondriasis. Violent anger has a very palpable effect on the frame, and often occasions very alarming symptoms : a fit of rage has even brought on an attack of epilepsy, and sometimes, of apoplexy. The more pleasing emotions of love and joy, if carried to excess, are injurious to the constitution. In epileptic patients, good news has induced a paroxysm, while, in the case of a lady, quoted in Dr. Jebb's Works, love appears to have had a considerable influence in the production of fits of catalepsy.\* But in all these cases, and in every other

\* This was, altogether, a very remarkable case. The subject was a young lady, whom, after having been afflicted for several months, Dr. Jebb was requested to visit. He found her employed in netting, and just in the act of passing the needle through the mesh, in which position, he informs us, "she became rigid, exhibiting, in a very pleasing form, a figure of death-like sleep, beyond the power of art to imitate, or of imagination to conceive. In about half an hour after his arrival, the statue-like appearance being yet unaltered, she sang three plaintive songs, in a tone of voice most elegantly expressive, and with

case connected with moral causes, the effect is produced immediately upon the brain, through the medium of that close and mysterious sympathy which exists between that remarkable organ, and every other part of the body.

As regards the *physical* causes, however, I may be allowed to discuss them at greater length; because *they* come more immediately under the province of the medical practitioner; and because we have direct and tangible proofs of their existence.

The most obvious physical cause is a derangement of the stomach, and of its accessory organs. When we consider the importance of digestion, by referring to the purposes for which it is designed, we shall immediately infer that the organs destined to effect this important purpose, must be extensive and adequately fashioned. The stomach itself is copiously furnished with blood and nervous energy; so also are the bowels, and the other organs engaged in assimilating the nutritious part of our food to the blood. Considering these things, and knowing that the length of the alimentary canal is nearly

such affecting modulation, as evidently pointed out that some powerful passion of the mind was concerned in the production of her disorder. In a few minutes afterwards, she sighed deeply, the spasm in her limbs was immediately relaxed, a general tremor followed, and soon after she so far recovered as to be able to enter into a detail of her symptoms."



six times that of our body, that it is very delicately constructed, and, above all, that it constitutes a very extensive organ of sympathy, “presenting,” to borrow an emphatic expression, “a very broad mark for the shafts of disease ;” knowing these things, I say, we shall be at no loss to account for the various disagreeable sensations that are produced by a bad digestion, which, instead of converting the food into a bland, homogeneous, mild, cream-like fluid, renders it either acid or acrid, evolving noxious gas from vegetable matter, and changing animal substances into an oily, crude, putrid, stimulating poison. Along an extent of surface, varying in length from thirty to forty feet, containing many glands, and sympathising in a very extraordinary manner with every part of the frame—internal as well as external—along a surface thus constituted, I say, this putrid, acrid, stimulating noxious matter is propelled, irritating the numerous nerves to which it is exposed, and producing all that variety of distressing sensations with which the dyspeptic and nervous patient is so painfully familiar. But there is another evil arising from a bad digestion, which is the formation of the wind or flatus. Air distending the stomach, or any part of the bowels, will have an effect similar to that produced by more solid contents ; for it will cause great irritation, and produce a variety of uneasy sensations in various parts of the body. Dr. Whyte observes, that he fre-



quently felt a plain connection between wind in the primæ viæ, and pains in his legs and feet; and the uneasy sensation sometimes coming and going between these parts. In short, there can be no reason why flatus, which may be of a very acrid and irritating quality, should not cause just as much mischief as any other stimulus.

“The physiological action of food and drink on the stomach, is shown,” observes Dr. Johnson, “more on other organs and parts, than in the stomach itself. When the quantity is moderate, and the quality simple, there is nothing more experienced than a general sense of refreshment, and the restitution of vigour, if some degree of exhaustion has been previously induced. We are then fit for either mental or corporeal exertion.\* But let a full meal be made, and let a certain quantity of wine, or other stimulating liquor be taken, we still feel no distinct sensation in the stomach; but we experience a degree of general excitement or exhilaration. The circulation is quickened, the face shows an increase of colour, the countenance becomes more animated, the ideas more fluent. This excitement from food and drink, however, is not only transient, but it is, moreover, partial. In proportion as we have excited the Ganglionic System

\* “I should, perhaps, except the *dinner*-meal, which is always followed by some degree of mental and corporeal inaptitude for exercise, however temperate the repast.”

of nerves, or, in other words, the involuntary or vital organs, (stomach, heart, &c.) we disqualify the voluntary muscles for action, and the intellectual system for deep thought, and other mental operations. In fact, we are then only fit to sit and talk very comfortably over our wine, and ultimately go to sleep. It will be sufficiently evident that pleasurable sensations are diffused over mind and body by the presence of food and wine in the stomach, *without the existence of any distinct sensation, or sensible excitement in the stomach itself*. This is an obvious truth, and it is of great importance to remember it: for if the nerves of the stomach, *in a state of health*, be capable of exciting pleasurable emotions in the mind, and comfortable sensations in the body, on the application of good food and generous wine, we shall find that the same nerves, *when in a disordered state*, are equally capable of exciting the most gloomy thoughts in the mind, and the most painful sensations in the body, on the application of the very same species of refection, either with or *without* an unpleasant sensation in the stomach itself."

Thus, then, so long as the nerves of the stomach are in a healthy state, man may do many things with impunity; but no sooner do they acquire a morbid state of sensibility, than he becomes a victim to the most acute suffering. Such food and drink as, in a state of health, would only nourish or

agreeably stimulate, will then act like a poison on the system, deranging the mental, and disordering the corporeal functions. Let a person, for instance, labouring under any of the multifarious evils included under the head of *Nervous Disorders*, and more especially under mental despondency, brought on by moral affliction, take food and wine in rather too great a quantity, or of a certain injurious quality, and the symptoms will be aggravated, not, perhaps, immediately upon digestion, but after a short lapse of time. Let the same person considerably reduce the quantity of even the mildest food, or abstain a whole day from any strong food; and let him take no wine, nor any vegetable substance of difficult digestion, and he will find the symptoms mitigated; and by proceeding still further, and rigidly adhering to a very abstemious diet, taking such medicines as may be calculated to restore the natural, and soothe the morbid, sensibility of his stomach and bowels, and he will eventually experience the most marked and surprising benefits. We have seen this proved so often, and observed so frequently the wonderful influence of this nervous derangement upon the mind, that, with Dr. Johnson, we are convinced that the great majority of those complaints termed *nervous*, might be remedied—if not wholly removed,—by paying proper attention to that capricious organ, the stomach.

Now, the causes of the derangement of the sto-

mach are very various. All the moral causes which we have enumerated as productive of nervous disorders, act in most instances prejudicially upon the stomach. It is not worth while to attempt any physiological explanation of the mode in which anxiety, tribulation, and mental discomfort of every kind, effect the corporeal, physical disorder. We know, and have endeavoured to explain, that every function of our body is under the influence of nervous action; but more particularly is digestion. Mental anxiety not only arrests or disturbs the digestive process in the stomach, by interfering with and weakening the nervous influence upon which it depends, and thereby exposing the food to the action of such chemical laws as would operate upon it out of the body. This is not all: the same cause vitiates, or impairs in a very remarkable manner, the secretion of bile, consequently creating a powerful source of irritation for the nerves of the bowels. The consequence is, that the whole track of the small intestines\* is in a state of uneasiness and irritation, until the badly-digested matter has passed into the large, or lower bowels. The mind and body are now both relieved as it were from an oppressive and annoying burthen, and as Dr. Johnson has

\* Physiologists have divided the intestines into large and small: it is in the latter, which are situated first in succession from the stomach, that the most important assimilation of the food is effected.

observed, a most significant remark is often made by persons in this condition, namely, that *if they could live without food they would be well*. “Whenever this observation is made,” he continues, “we may rest assured that there is a morbid sensibility established in the nerves of the alimentary canal; and it is two to one that this has been induced by mental anxiety, or, in other words, by moral causes.

Another frightful source of Nervous Disorders, is an intemperate indulgence in fermented, but especially in spirituous liquors. Without any intention of advocating the doctrine, or of commending the reputed practice, of the Pythagoreans, ancient or modern, I must be allowed to reprobate the excessive use, or rather, the abuse of fermented liquors. Although wine was invented, and its use allowed, “to make glad the heart of man;” and although a moderate and imprudent indulgence in it can never excite reprobation, or cause mischief, still the sin of drunkenness is an extensive and a filthy evil. Not only does it demoralize, debase, and finally destroy its unhappy victim, but it renders him incapable of performing the ordinary duties of his station, whatever that station may be, and constitutes him an object of disgust to others, and of pitiable misery to himself. It is well to talk of the Bacchanalian orgies of talented men, and call them hilarity and glee. The flashes of wit “that were wont to set the table in a roar;”—the brilliancy of genius, that casts



a charm even over folly and vice;—the rank and fame of the individual, no doubt increase the fascination of his failings; but, however bright and wonderful may be the corruscations of his talent while under the influence of wine, his frame is debilitated, tottering, imbecile, when the stimulus of the potation has subsided.

The moral effects of an immoderate, and, therefore, an improper use of fermented liquors, is no part of my subject; the physical effects I shall briefly describe, as they are extensively conducive to the production of nervous disorders.

Let me premise, however, that I am far from asserting that all stimulus should be prohibited.

Those whose occupations are particularly laborious, and who are much exposed to the external atmosphere, require an absolute stimulus over and above that of the food which they eat. Dr. Franklin advocated a contrary doctrine, and inculcated the fact, that a two-penny loaf contains more actual nutriment than three times that worth of beer; meaning to say, that a two-penny loaf would be much better for a man than a quart of beer; and he adduces the horse, and other beasts of burthen, as examples of the inefficacy of the use of fermented liquors; quoting from Dr. Reid, of Philadelphia, a very eloquent passage about the sinewy strength of the noble animal, for whose refreshment a draught of water and a mouthful of hay are quite sufficient.



All this is founded upon decidedly erroneous premises. To enable a hard-working horse to go through his toil with spirit, he must have corn, or some other article subject to fermentation. Now, the horse, as well as other animals of this class, have stomachs very capacious, and probably adapted to the production of this fermentation; so that corn is, in fact, a powerful fermented stimulus to the beast. We have mentioned this fact, because we are aware that this supposed temperance of the horse has been mightily extolled by those squeamish worthies, who would have us eschew even small beer, so pernicious are all fermented liquors considered by *them*.

Let us, then, assume, as a settled point, that stimulus, in a certain degree, is necessary to sustain the strength and invigorate the frame of the toiling man; and the best proof of its good effect is, the comfort and energy which it imparts to its consumer: but if this necessary stimulus be exceeded, then it is abused, and every mouthful in addition becomes poisonous in its ultimate effect. The first physical effect which is produced, is upon the internal vascular coat of the stomach, as we may learn from the warmth which is evident to our sensation. The repetition increases the circulation of the blood, which seems, as it were, to dance through the veins; the pulse becomes quick and full, the eyes sparkle, and the imagination is quickened: in short, the whole

frame is replete with excitement, as is evident in every word, look, and action. If the affair ends here, all is well enough, if not too frequently repeated ; for it is a settled rule in the animal economy, that excitement long sustained, or frequently repeated, will, sooner or later, wear out the machine ; and in proportion to the degree and extent of such excitement, will be the subsequent lassitude and debility.

This fact, indeed, will explain the operation of nearly all the moral and physical causes of disease ; it is, in truth, an excess of action, of either the mental or corporeal functions, that produces such mischief on the frame. “ *In medio tutissimus ibis,*” is a safe rule in more senses than the Roman bard intended it should apply ; and the physician is continually reminded of its extreme utility.

We will suppose, then, that the potation goes on, and very speedily a new effect is produced. The brain, and its nerves, oppressed by the load of blood thrown up into the head, and irritated through their quick sympathy with the stomach ; oppressed also by the powerful pulsation of the larger arteries connected with them, become in a degree paralyzed ; the tongue moves with difficulty, and loses the power of distinct articulation ; the limbs become enfeebled and unsteady ; the mind is deranged, being either worked up into fury, or reduced to ridiculous puerility ; and if the stimulus be pushed even further

than this, absolute insensibility ensues, with vomiting and apparent lifelessness. Such is a brief view of the physical progress of a debauch: and now let us briefly trace the effect of all this mischief upon the more important parts subjected to its baneful influence.

As the stomach is the receptacle of the poisonous fluid, it is one of the first organs which becomes affected by its virulence. Nausea, flatulence, heart-burn, with all the usual and most prominent symptoms of indigestion, occur; more especially loss of appetite, the food taken by a confirmed sot being scarcely sufficient, apparently, to sustain life. The liver, with the other glands of the body, sympathise in the derangement, and the bowels become irregular in their action, being, for the most part however, exceedingly relaxed. The brain also participates in the consuming injury sustained by the other parts; and if there be not actually head-ache, there is a dizzy, muzzy, disagreeable sensation, inducing a desire to doze, and rendering the individual heavy, dull, and listless. A sure symptom of this effect upon the brain, and an unerring characteristic of the condition of the patient, is a partial paralysis of the upper eye-lid, giving to the eyes the appearance of sleepiness. This is a far more certain symptom than blotches on the face, and more common in occurrence; and an experienced medical practitioner will frequently detect the propensities of the patient

by this appearance alone. These structural derangements may proceed for some time without proving fatal; the termination depending, of course, upon the strength and stamina of the patient. Very often, however, some serious affection of the liver, or brain, will occur, which, by its extent and intensity, destroys life very rapidly. It is a common thing for persons addicted to drinking, to die suddenly from apoplexy.

Abscess of the liver, with dropsy of nearly all the internal cavities of the body, is another frequent termination of an existence which is embittered and rendered miserable by a train of nervous symptoms, which no human skill or ingenuity can alleviate.

Indeed, in these distressing cases, little benefit is to be derived from medicine; and not any unless the practitioner can control—and completely control—his patient. But this, in most instances, is utterly impossible; a habit of drinking once acquired, can rarely be abandoned.

A physician\* of great eminence in the metropolis, and most deservedly respected and beloved by his professional brethren, once informed me that he

\* The same gentleman also informed me that he had recently seen several cases, where much internal structural disease was caused by merely indulging in a single glass of “grog” after supper. In all, the liver and stomach were much diseased: and I firmly believe myself, that *spirits* act in a manner the most injurious on the human frame, although taken in ever so small a quantity.

had never heard of more than two instances in which a thorough reformation was effected; and I must confess that, as far as my own experience extends, I have never yet been blessed with a reformed sinner. To shew the fascinating influence of this beastly custom, I may mention the following case. A lady, not thirty years of age—accomplished, and moving in very genteel society—after the death of her mother, contracted a habit for tippling; and her liquor was not altogether of a lady-like quality—rum being her favorite beverage. Twice was she reduced very nearly to death's door, by her indiscretion; and although she was informed that, in the end, it must be fatal—that she was daily contributing to her own destruction—and that all the nervous horrors which she experienced were produced by her habits—she candidly confessed that abstinence was impossible; and if it really would kill her, she must die, for she could not and would not abstain.

If the patient be not too far advanced in his ruin, he may possibly be reclaimed; but much caution ought to be exhibited in the method of cure. The sudden or too rapid abstraction of all stimulus would be exceedingly dangerous: it must be wrought by degrees, and with judgment.

Another cause of the most distressing nervous feelings is induced by the change which occurs in the constitution in pregnancy. Females of a sensi-



tive disposition, and of an irritable temperament, are often victims of the most dreadful forebodings—feeling, in their own minds, the perfect conviction of an unfavourable termination to their travail. No arguments, no persuasions, no encouraging advice, can eradicate the impression which they have conceived; and as this evil usually happens with the first child, it proves a source of great disquietude to the patient's friends. At the time of the unfortunate death of the Princess Charlotte, I knew of two or three young females, who were in this predicament, but, as is generally the case, they all did very well, and lived to laugh at their own infirmity. I never anticipate any evil from this affection; it is certainly most distressing to the patient and her friends; and I mention it if possible to console such individuals as may be suffering from a similar affliction; for they may rest assured, that, as “God tempers the wind to the shorn lamb,” so will he apportion strength and fortitude in the hour of trouble, to those who are destined to endure “the great pain and peril of child-birth.” Let them reflect that millions, and thousands of millions have passed through their travail safely and successfully; and that although it is decreed that “in sorrow woman shall bring forth children,” yet our beneficent and all-merciful Creator has endued her with strength to bear, and resolution to suffer, even this most exquisite of pains. Where one untoward “labour” occurs, there are ninety-nine easy and favourable.



I have now explained the most prominent causes of Nervous Disorders, all of which may be considered to act either directly or indirectly on the brain, by determining an excess of blood to that important organ. There is, however, one other cause which I would mention, and which at first sight may appear somewhat paradoxical. I allude to that debility, which is consequent upon a full, or plethoric state of the vascular system, and which is very frequently indicated by sanguineous evacuations from the different outlets of the body. By attending to the general temperament of patients of this description, we shall discover about them evident indications of fulness and distention. Hysterical affections are quite as common among stout and plethoric females, as among those of a contrary constitution; while Hypochondriasis and its attendant evils are, perhaps, more prevalent among corpulent men, who indulge freely in the pleasures of life, than among thin and abstemious individuals. The distention of the vascular system, which usually occurs in these cases, imparts to the nerves and blood-vessels a higher degree of sensibility than they possessed before: so that an excellent opportunity is afforded for the inroad of Nervous Disorders.

The sudden checking or suspension of accustomed and salutary evacuations is another frequent cause of nervous irritation. Where hemorrhoidal discharges have been for some time habitual, and where they

become suddenly suppressed; loss of strength and spirits, depraved appetite, sickness, head-ache, and other unpleasant symptoms have been the consequence.

The same distressing evils very frequently result from a suppression of the menstrual discharge—a symptom, however, too often considered more serious than it really is. In these instances of suppressed evacuations, the suppression is occasionally the *effect*, and not the *cause*, of the constitutional derangement, and this will apply most particularly to the suspension of the menstrual discharge.

From these instances, however, we must except the various evils—nervous as well as otherwise, which arise from the final cessation of this salutary evacuation at an advanced period of life. The changes that take place in the body at this time, and, as is generally supposed, in consequence of the permanent cessation of menstruation, are very curious and interesting: in many instances the most distressing nervous symptoms supervene, and the patient's existence is rendered miserable.

There may be some other trivial causes which I have not noticed: I have nevertheless mentioned and described those which are of the most frequent occurrence, as well as of the most mischievous import, and I am not aware of having omitted any essential matter, connected with this portion of my subject. In conclusion, however, I ought per-

haps to allude to those distressing evils which are caused by certain physical deformities, as curvature of the spine, distortions of the chest, &c. In these instances, the cause being permanent, and without any possibility of alteration, the power of the practitioner is necessarily much restricted ; indeed it can only be exercised in affording a temporary alleviation to the sufferings of the patient, by mitigating those more violent symptoms, which may be aggravated by occurrences, not entirely dependant upon the physical malformation.

## CHAP. IV.

### SYMPTOMS OF NERVOUS DISORDERS, WITH THEIR CONCOMITANT AFFECTIONS AND TERMINATIONS.

HAVING detailed, in a manner I hope sufficiently intelligible, the constitutions most liable to the accession of Nervous Disorders, as well as the principal causes which induce such disorders, we are now to treat of the symptoms, as introductory to the most important point of all—namely, the best mode of cure.

In the majority of diseases with which the human frame is afflicted, the symptoms are so regular, and constant, and succeed each other so methodically, that it is no difficult matter to describe them systematically: in Nervous Disorders, however, which are characterized throughout,—whether in their causes, their symptoms, or their terminations, by the greatest complexity and irregularity,—it is indeed a difficult task to lay down any decided plan for the description or classification of the symptoms. The variety of constitution—of causes—and even of existing

circumstances, render such an undertaking almost impossible; for a nervous patient will complain of nearly every evil to which the frame of man is subject. “Non *unam* sedem habet,” as the learned Mead expresses it, “Sed morbus *totius* caporis est.”\*

Consistently, however, with the theory which I am disposed to adopt, as the only one which is borne out by *physical* demonstration, and as perfectly consonant with sound reason, I shall first trace those symptoms which I am induced to believe are caused by a determination of blood to the head, and afterwards, I shall enumerate as methodically as I can, the other outward signs of nervous derangement.

Individuals labouring under nervous derangement, are incessantly exposed to an alternate state of excitement and depression: and one of the most distressing, as well as characteristic symptoms, is a degree of most active vigilance, in which, without any bodily pain or uneasiness, the mind is in constant action, giving birth to a succession of ideas, with such rapidity as altogether to preclude sleep. This state may be induced by excessive bodily or mental exertion (hence the phrase “too tired to sleep,”) by anxiety, by late hours, and by all those causes which we have enumerated. It is usually accompanied with increased action of the heart; the feet are often cold, and the pulse in the carotid

\* Monita et Præcept. Med. cap. XVII.



arteries is preternaturally strong. This high state of excitement may often be relieved, and sleep induced, by lying on one side, and firmly compressing one of the carotid arteries with the thumb; or by some other means of diminishing the flow of blood to the brain.

While this is the nocturnal condition of the patient, he is exposed during the day to a complaint, which is often extremely distressing, and not easily alleviated: I allude to noises in the head, of different kinds and degrees. It is more commonly characterized by a roaring, rushing sound, in one or both ears, which is often compared to the sound of the wind, or the roaring of the sea, the former of which it resembles, by having gradually increasing and decreasing gusts, and the latter by consisting of alternate waves. It frequently increases towards night, and is occasionally only perceived on lying down. Sometimes the noise resembles music, and particularly the tingling of bells: and "I have heard it," says Dr. Parry, "compared to the squeaking of rats or mice, and to the sound of human voices."

There are other affections connected with this state of the brain, to which nervous persons are particularly liable. Dreaming, to an inordinate and harassing extent, is one of these: deafness, with noises in the ear, is another; but the most common, perhaps, is head-ache, in some of its various forms and modifications.

In the consideration of this symptom, we are particularly interested in the sympathy which exists between the stomach and its accessory organs, and the brain; for it occasionally happens, that the head is affected from previous derangement of the stomach, or of some part of the alimentary canal, although not to the extent commonly believed: while on the other hand, the head may be primarily affected, inducing secondary disease in the stomach. A very common, but a very erroneous, opinion prevails with regard to the general causes of head-ache, it being, in most instances attributed to some derangement either in the stomach or the liver; and this more particularly with regard to what is called "sick head-ache." These affections are seldom produced by primary derangement of the stomach and bowels: they depend, more or less, upon a determination of blood to the brain, which determination induces the nausea and flatulence, and other inconveniences in the stomach, just as sickness and vomiting, are the *consequences*, and not the *cause*, of the affection of the head, produced by a blow on the cranium. Of precisely the same character is the ordinary head-ache, without sickness, to which nervous patients are so subject, which never depends upon a bad state of stomach, and which is often dreadfully aggravated by means injudiciously applied, without reference to that particular state of the brain of which I have been speaking.

In Nervous Disorders, then, where the functions of the stomach are performed with tolerable accuracy, and such is often the case, we should be cautious in attributing the pain or uneasiness in the head to any morbid irritability of that organ, or of the bowels. Such a state, however, would doubtless aggravate the evil; but there is no safer or more valuable guide to the practitioner, than a clear and decided knowledge of the actual or proximate cause of disease. Without this, he would be frequently doing great mischief to the patient, by attending merely to the secondary derangement of one set of organs, before he vanquished the primary evil existing in another: and it is a want of proper and diligent reflection on the *causes* of disease, that so often induces us to admire the wonderful power of Nature, in resisting such sedulous efforts to destroy or injure her works.

From simple head-ache, we come to the consideration of the more serious affections of the brain, beginning with Vertigo, or giddiness.

True Vertigo is an alarming and dangerous malady, as it usually indicates the supervention of some of the most fatal diseases of the brain, as epilepsy, paralysis, and even apoplexy. The patient first feels a quick rotary sensation in the head: this is instantly succeeded, often by nausea, and sometimes by vomiting; at other times, all the faculties are suddenly suspended, and the patient falls senseless

and deprived of motion. This is true Vertigo, which is to be carefully distinguished from an affection, frequently confounded with it. This affection is a "swimming" of the head, and is essentially different from Vertigo. The patient, after stooping, and then suddenly rising up into an erect posture, experiences a sensation as if objects were approaching him, or more usually receding from him, and becoming dark; but no sensation of sickness ensues. "I believe," says Dr. Parry, "that this affection arises from a state of circulation totally opposite to that in vertigo; for while, in vertigo, there is a greater impulse of blood to the brain than is natural, the sensation of "swimming" arises from the want of due impetus in the cerebral vessels. This difference is proved by these further circumstances, that true vertigo may be relieved by blood-letting, and compression of the carotids, while "swimming" is increased by the compression, and is actually similar to the feeling which precedes syncope (fainting) from blood-letting."

Other optical delusions also prevail: sometimes objects seem to move in a circular direction, or their perpendicular position is inverted, and they become "topsy turvy." Occasionally they appear doubled; and the vision is often so indistinct, that no object can be perfectly defined in its form or situation; and it usually appears as if enveloped in a cloud, or covered by a curtain. Other senses participate

in the derangement, particularly that of feeling. Patients have fancied themselves drawn up towards the ceiling, while others have thought that, when walking across the room, they were treading on down or feathers. A sensation of insects crawling about the body, with a tingling feel, is often experienced, followed by a transient numbness in some parts of the body, particularly the extremities; and very often by convulsive twitchings, beginning in the muscles of the face, and extending, occasionally, to every part of the body, accompanied by a partial or general tremor. The senses of hearing, smelling, and tasting, are also vitiated in a greater or less degree, creating considerable alarm in the patient's mind.

But the most extraordinary effect of extreme nervous irritability, as exemplified by optical delusions, is that which produces apparitions and spectres; although in these instances it has been well ascertained, that recollected images only are presented to persons labouring under these delusions. I could adduce several examples of this curious affection; but I shall content myself with the following remarkable narrative, written by Nicolai, the celebrated bookseller of Berlin, and quoted by Dr. Ferriar in his work on the Theory of Apparitions. After some preliminary observations on the folly of believing such appearances to be supernatural, Nicolai continues, "I myself experienced a case of this



nature, which to me appears highly remarkable, both psychologically and medically. I saw in a state of mind, completely sound, and after the first terror was over, with perfect calmness, for nearly two months, almost constantly and involuntarily, a vast number of human and other forms, and even heard their voices, though all this was merely the consequence of *a diseased state of the nerves, and an irregular circulation of the blood.*

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“During the ten months of the year 1790, I had experienced several melancholy incidents, which deeply affected me, particularly in September, from which time I suffered an almost uninterrupted series of misfortunes, that afflicted me with the most poignant grief. I was accustomed to be bled twice a year, and this had been done once on the 9th of July, but was omitted to be done at the end of the year 1790. I had in 1783 been suddenly taken with a violent vertigo, brought on by a sedentary life, and a continual exertion of the mind. This indisposition was successfully removed by means of a more regular and strict diet: in the beginning I had found leeches to the arms particularly efficacious, and they were afterwards repeated two or three times annually, when I felt violent congestions in the head. The last leeches which had been put on, previously to the appearance of the phantasms

of which I am about to speak, had been applied on the 1st of March, 1790 ; less blood had been consequently evacuated in that year than was usual with me, and from September I was constantly occupied in business that required the most unremitting exertion, and that was rendered still more perplexing by frequent interruptions."

"I had in January and February of the year 1791 the additional misfortune to experience several extremely unpleasant circumstances, which were followed on the 24th of February by a most violent altercation. My wife and another person came into my apartment in the morning in order to console me, but I was too much agitated by a series of incidents, which had most powerfully affected my moral feeling, to be capable of attending to them. On a sudden I perceived, at about the distance of ten steps, a form like that of a deceased person : I pointed at it, asking my wife if she did not see it ? It was but natural that she should not see anything : my question, therefore, alarmed her very much, and she sent immediately for a physician : the phantasm continued about eight minutes. I grew at length more calm, and being extremely exhausted, fell into a restless sleep, which lasted about half an hour. The physician ascribed the apparition to a violent mental emotion, and hoped that there would be no return, but the violent agitation of my mind had in

some way disordered my nerves, and produced farther consequences, which deserve a more minute description.

“At four in the afternoon the form which I had seen in the morning re-appeared. I was by myself when this happened, and being rather uneasy at the incident, went to my wife’s apartment, but there likewise I was prevented by the apparition, which, however, at intervals disappeared, and always presented itself in a standing posture: about six o’clock there appeared also several walking figures, which had no connection with the first.

“I cannot assign any other cause of all this, than a continued rumination on the vexations I had suffered, which, though calmer, I could not forget; and the consequences of which I meditated to counteract: these meditations occupied my mind three hours after dinner, just when my digestion commenced. I consoled myself, at last, with respect to the disagreeable incident which had occasioned the first apparition, but the phantasms continued to increase and change in the most singular manner, though I had taken the proper medicine, and found myself perfectly well. When the first terror was over, I beheld the phantasms with great emotion, taking them for what they really were, remarkable consequences of an indisposition. I endeavoured to collect myself as much as possible, that I might preserve a clear consciousness of the changes which

should take place within myself; I observed these phantasms very closely, and frequently reflected on my antecedent thoughts to discover, if possible, by means of what association of ideas exactly these forms presented themselves to my imagination. I thought at times I had found a clue, but taking the whole together, I could not make out any natural connection between the occupations of my mind, my occupations, my regular thoughts, and the multifarious forms which now appeared to me, and now again disappeared. After repeated and close observations, and calm examinations, I was unable to form any conclusion relative to the origin and continuation of the different phantasms which presented themselves to me. All that I could infer was, that while my nervous system was in such an irregular state, such phantasms would appear to me as if I actually saw and heard them; that these illusions were not modified by any known laws of reason, imagination, or the common association of ideas; and that probably other people, who may have had similar apparitions, were exactly in the same predicament. The origin of the individual forms which appeared to me, was undoubtedly founded on the nature of my mind, but the manner in which it was thus affected, will probably remain for ever as inscrutable as the origin of thought and reflection. After the first day, the form of the deceased person no more appeared; but in its place, there appeared

many other phantasms, sometimes representing acquaintances, but mostly strangers; those whom I knew were composed of living and deceased persons, but the number of the latter was comparatively small. I observed the persons with whom I daily conversed, did not appear as phantasms; these representing, chiefly, persons who lived at some distance from me. I attempted to produce, at pleasure, phantasms of persons whom I knew, by intensely reflecting on their countenance, shape, &c.; but distinctly as I called to my lively imagination the respective shades of three of these persons, I still laboured in vain to make them appear to me as phantasms, though I had before involuntarily seen them in that manner, and perceived them some time after, when I least thought of them. The phantoms appeared to me contrary to my inclination, as if they were presented to me from without, like the phenomena of nature, though they existed no where but within my mind. I could at the same time distinguish between phantasms and real objects, and the calmness with which I examined them, enabled me to avoid the commission of the smallest mistake. I knew exactly when it only appeared to me, that the door was opening, and a phantasm entering the room, and when it actually opened, a real person entered.

“ These phantasms appeared equally clear and distinct at all times, and under all circumstances ;



both when I was by myself and when I was in company, and as well in the day as at night, and in my own house as well as abroad : they were, however, less frequent when I was in the house of a friend, and rarely appeared to me in the street. When I shut my eyes, these phantasms would sometimes disappear entirely, though there were instances when I beheld them with my eyes closed ; yet when they disappeared on such occasions, they generally re-appeared when I opened my eyes. I conversed, sometimes, with my physician and my wife, of the phantasms which at that moment surrounded me ; they appeared more frequently walking than at rest, nor were they constantly present. They frequently did not appear for some time, but always re-appeared for a longer or a shorter period, either singly or in company ; the latter, however, being most frequently the case. I generally saw human forms of both sexes, but they usually appeared not to take the smallest notice of each other, moving as in a market-place, where all are eager to press through the crowd ; at times, however, they seemed to be transacting business with each other : I also saw several times, people on horseback, dogs and birds. All these phantasms appeared to me in their natural size, and as distinct as if alive, exhibiting different shades of carnation in the uncovered parts, as well as in different colours and fashions in their dresses, though the colours seemed somewhat paler than in

real nature; none of the figures appeared particularly terrible, comical, or disgusting, most of them being of an indifferent shape, and some having a pleasing appearance.

“The longer these phantoms continued to appear, the more frequently did they return, while, at the same time, they increased in number about four weeks after they had first appeared. I also began to hear them talk; the phantoms sometimes conversed among themselves, but more frequently addressed their discourse to me; their speeches were commonly short, and never of an unpleasant turn. At different times there appeared to me, both dear and sensible friends, of both sexes, whose addresses tended to appease my grief, which had not yet wholly subsided: these consolatory speeches were, in general, addressed to me when I was alone; sometimes I was accosted by these consoling friends while in company, frequently while real persons were speaking to me. These consolatory addresses consisted, sometimes, of abrupt phrases, and at others, they were regularly connected.

“Though both my mind and body were in a tolerable state of sanity all this time, and these phantasms became so familiar to me that they did not cause me the slightest uneasiness, and I even sometimes amused myself with surveying them, and spoke jocularly of them to my physician and my wife, I yet did not neglect to use proper medi-

cines, especially when they began to haunt me the whole day, and even at night, as soon as I awaked.

“At last it was agreed that leeches should be again applied to me, as formerly; which was actually done April 20th, 1791, at eleven o'clock in the morning. No person was with me besides the surgeon; but during the operation my chamber was crowded with human phantasms of all descriptions. This continued, uninterruptedly, till about half an hour after four o'clock, just when my digestion commenced, I then perceived that they began to move slowly. Soon after, their colour began to fade; at seven o'clock they were entirely white. But they moved very little, though their forms were as distinct as before: growing, however, by degrees more obscure yet not fewer in number, as had generally been the case. The phantoms did not withdraw, nor did they vanish, which, previous to that time, had frequently happened. They now seemed to dissolve in the air, while fragments of some of them continued visible a considerable time. About eight o'clock, the room was entirely cleared of my fantastic visitors.

“Since this time I have felt, twice or three times, a sensation as if these phantasms were going to re-appear, without, however, actually seeing any thing. The same sensation surprised me just before I drew up this account, while I was examining some

papers relative to these apparitions, which I had drawn up in the year 1791."

Nervous patients are continually referring to their heads as the source of all their sufferings. Besides the affections which I have adverted to, there is one which is often extremely troublesome, and which the learned have called *Clavus Hystericus*. This is characterized by an uneasiness, generally a sensation of weight or constriction on the outer part of the head, just, in fact, as if a particular part was heavily pressed upon: or, occasionally, the sensation resembles that which would be produced by a cord, tied tightly round the head. Sometimes the pain is principally on one side of the head, which is, at the same time, affected with a degree of numbness; at another time, it is in the forehead, between the eyebrows, and in this case it is always accompanied by an affection of one or both eyes.

I have said that Vertigo is frequently the forerunner of other more serious maladies, as Epilepsy, Paralysis, and Apoplexy. By this I mean that the brain is in a condition favourable for the supervention of these affections. I am now, therefore, to take a brief view of those diseases, as constituting the most usual *physical* terminations of Nervous Disorders.

Let me premise that every one of these three last mentioned maladies depend immediately upon an excess of blood in the vessels of the brain; so that

those persons are most liable to them, who labour under any of the Nervous Disorders dependent upon a determination of blood to the head; but particularly those who are subject to vertigo, head-ache, and restless, dreaming sleep.

That Epilepsy depends upon a derangement of the nervous system, from the undue pressure of blood upon the brain, is indicated by every one of its distressing symptoms. The convulsive and rigidly-contracted state of the various muscles, particularly those of the eyes, face, tongue, neck, throat, upper extremities, and of respiration, accompanied with loss of sense, and followed by a longer or shorter stupor, in which the breathing is occasionally *stertorous*,\* these are all indicative of pressure on the brain; for the parts thus affected are under the immediate control of those nerves which rise from the brain—a sufficient proof, without any other, that we must look to the brain for the seat of this alarming malady. Again; Epilepsy is most apt to attack those individuals who are most liable to Nervous Disorders, and particularly those quick, irritable females, in whom menstruation is not fully established. In advanced age, it attacks those who have been long constitutionally nervous, or who have lost their accustomed excessive discharges, whether arising from

\* By *stertorous* breathing, the general reader will understand that hard, laboured, irregular, loud respiration, which is always more or less characterized by grunting.



bleeding at the nose, or from piles, the discharges from ulcers, &c.; or even the suppression of gout, or customary eruptions: in short, it may be induced by any cause which produces a great degree of nervous irritation or derangement.

Another cause of Epilepsy is to be found in local diseases of the cranium, and particularly in small spiculæ, or other projections of the inner table of the skull. These, by exciting local irritation, or even inflammation, of the brain, produce a strong predisposition in that organ to admit the access of confirmed Epilepsy. In a case which Mr. Brodie and myself had in charge about three years ago, the patient, a young man of great industry, by profession an artist, had experienced two or three epileptic fits, and was so constitutionally irritable and nervous, that the moment he applied more than usually to his avocations, his head became so giddy and confused, as to put an end to his work. Upon close inquiry we ascertained that, some years before, a large sword fell upon his head, cutting through the scalp, and on the spot we found a very evident irregularity on the surface of the skull. It was Mr. Brodie's opinion, as well as my own, that these fits, with the distressing constitutional nervous symptoms, depended on some derangement of the inner table of the skull, occasioned by the accident I have mentioned. We had, however, no opportunity of ascertaining the fact, as we did not consider ourselves

justified, under all the circumstances of the case, to proceed to the extremity of an operation so serious as that of trepanning.

Epilepsy, then, being once established, may be "brought on," or excited by many causes; but especially by those which produce excessive excitement or increase the circulation: as violent exercise, mental or bodily, hot bathing, full meals, fermented liquors, &c., and by the more active passions of the mind. It must be obvious that, to ward off these attacks, the patient must pursue that plan of diet and regimen which is best adapted to diminish the action of the heart, and to lessen the flow of blood to the head. It is upon this principle, that the prevention of this formidable disease entirely hinges; and the best mode to carry it into execution will, of course, depend upon the adaptation of proper means to the existing circumstances of the case.

Arising from similar causes, and depending upon similar results, are those convulsive affections to which nervous patients are occasionally liable, and particularly such patients as are afflicted with Epilepsy. The most common form of these affections, and one of the most obstinate, is that called *Chorea*, or St. Vitus's dance. To the irregular, catching, spasmodic action, which characterizes this curious malady, every voluntary muscle of the body is liable; and we frequently see the face, the hands, the feet, and other parts of the body, incessantly in

motion, the patient often exhibiting the most violent and ridiculous gesticulations.

We now come to Paralysis or Palsy, and that to which it often leads, and which may be considered as an aggravated form of it—Apoplexy. This, not unfrequent, termination of Nervous Disorders is of two kinds: Paraplegia, or Paralysis of the lower limbs only, which does not depend upon any previous affection of the brain; and Hemiplegia, or Paralysis of one side, which *does* depend entirely upon mischief in the brain, or in some of its investing membranes. Paraplegia, although strictly a nervous disorder, is somewhat misplaced here, as its cause is not in the brain, nor, indeed, connected with any derangement of that organ; as, however, it constitutes a variety of Paralysis, and as it is sometimes produced by an excess of nervous irritation, it will be better that I should introduce, in this place, the little I may deem it necessary to say concerning it. This affection, then, most commonly depends upon some accident or disease, which induces inflammation in the spinal marrow, or in its coverings; or by any inordinate pressure made upon the same, whether arising from injuries of the spine, or otherwise. It is also very frequently occasioned by the absorption of lead and other mineral poisons into the system, as we see in painters, and those who are employed in lead and other mineral works. I have now a gentleman under my care, who had an

attack of a partial Paraplegia, if I may use such a term, from exposure to cold, damp, and fatigue, by which he has lost a considerable portion of the feeling and use of his right leg. That the brain is often affected in this malady, is proved by dissection ; but it is by no means clearly established that the primary cause of the mischief exists in that organ, as its increased vascularity might—from some predisposition of which we know, and can know, nothing—have been extended from some disease of the spinal marrow, or might have accrued from other causes, after the accession of the malady in the spinal cord.

In that variety, however, of this distressing disease, which is called Hemiplegia, and which is characterized by the loss of one side of the body, or the greater portion of it, we have direct and tangible evidence that the source of the evil is in the brain : and it is this affection which is more immediately suited to this part of my subject. In Hemiplegia, then, we have a loss of motion and of feeling to a certain extent on one side of the body : the eye is dimmed, drawn in, or protruded, the mouth drawn on one side,\* the arm enfeebled or utterly powerless, while the thigh and leg are dragged forward by an effort of the whole body, and there is a diminution of

\* The mouth is drawn up on the opposite side to that which is paralysed ; for the muscles of the injured side having lost their power, their antagonists on the other, having no corresponding muscles to contend with, act forcibly on the angle of the mouth, and draw it upwards.

sensibility in all the affected parts. The intellect, too, suffers in this wreck of existence, and, to use a thought of the most acute observer of human nature of the present day, the light of life seems trembling in the socket, and can only be expected to leap up occasionally into a momentary flash of brightness.

To the friends of the patient, there are not many afflictions with which man can be visited, more distressing than this; and were we not all imbued—and powerfully imbued—with a fondness for existence, under almost every variety of tribulation and suffering, we should almost wish to see one whom we tenderly regarded, released from a state of so much misery. Yet, is the patient himself unconscious of his afflictions. The imbecility of mind, which always accompanies the more aggravated forms of the malady, conceals from the sufferer the knowledge of his real situation, and all that he feels is the inability to exercise those physical qualities which the impulse of the moment prompts him to use. Of the extent of his powers he recollects nothing: the high and ennobling attributes of man,—those qualities which elevate him so far above all other creatures, are lost for ever; and, in the majority of the worst cases, the paralytic patient has degenerated from his “high estate” into an imbecile, childish, powerless, peevish animal. When we consider, too, that those who are gifted with the most splendid talents and acquirements, are, perhaps, more subject to this



dreadful affliction, than those of an opposite description, we shall be more particularly impressed with the horror of its ravages, and lament more deeply the inefficiency of mortal skill in alleviating its inflictions. Sir Walter Scott, with his accustomed facility, has drawn an accurate but melancholy picture of Paralysis, as occurring in the person of one, who had, at one time, been gifted with the most splendid mortal attributes.

“An easy chair filled with cushions, the extended limbs swathed in flannel, the wide wrapping-gown and night-cap, showed illness; but the dimmed eye once so replete with living fire, the blabber lip, whose dilation and compression used to give such character to his animated countenance, the stammering tongue that once poured forth such floods of masculine eloquence, and had often swayed the opinion of the sages whom he addressed, all these sad symptoms evinced that my friend was in the melancholy condition of those in whom the principle of animal life has unfortunately survived that of mental intelligence. He gazed a moment at me, but then seemed insensible of my presence, and went on,—he, once the most courteous and well-bred, to babble unintelligible, but violent reproaches against his niece and servant, because he himself had dropped a tea-cup in attempting to place it on a table at his elbow. His eyes caught a momentary fire from his irritation; but he struggled in vain for words to

express himself adequately, as, looking from his servant to his niece, and then to the table, he laboured to explain, that they had placed it, though it touched his chair, at too great a distance from him.”\*

Such is Paralysis—a frequent and an unhappy termination of those Disorders called Nervous. If the mischief in the brain be more extensive, and particularly, if there be any effusion, whether of blood, or of any other fluid, the powers of the frame are more effectually destroyed, and that disease occurs which is called Apoplexy. Here a decided *fit* takes place, and the victim becomes, to a greater or less extent, deprived of sensation and of voluntary motion. As in Epilepsy, so also in Apoplexy, the senses are rendered useless, the breathing is hard, loud, and stertorous, and the patient may lie in this lamentable condition many hours, before death releases him—not from his misery, because he is unconscious of suffering—but from a state, distressing to his friends, and hopeless, as far as medical aid is concerned. In Apoplexy, indeed, if the symptoms be not mitigated in a very short time

\* The incapacities of the Paralytic—the deafened ear—the dimmed eye—the crippled limbs, are also finely described by Juvenal, with

“ ——— omni

Membranorum damno major, dementia quæ nec  
Nomina servorum, nec vultum agnoscit amici.”

after the application of the proper remedies, we may reasonably expect that human skill will avail nothing; the mischief being too extensive, and utterly irremediable.\*

It is proverbially supposed that Apoplexy is frequently caused by excessive gluttony, and by an inordinate indulgence in such luxuries as wealth alone can procure. In many instances, indeed, this is the case: especially when such indulgence is devoted to an excessive use of spirituous or fermented liquors. There is not a medical practitioner of six years' experience, who cannot furnish many instances of such cases; but there are other causes, also, which operate in the production of Apoplexy; and, considering it, as I am inclined to do, as a more advanced state of Paralysis, or as a more inveterate form of that malady, I have found that grief and great mental anxiety or tribulation, particularly in irritable, *nervous*, sensitive dispositions, have hurried many an individual, if not to the tomb, to that state of mental and physical imbecility, which is almost worse than existence. In a case which fell lately under my notice—for I did not attend the patient from the beginning—a series of misfortunes had induced such a train of nervous evils, that Paralysis

\* By far the majority of sudden deaths which are generally attributed to Apoplexy, have nothing to do with any derangement of the brain; but depend upon some mischief about the heart. Apoplexy rarely destroys life so instantaneously.

ensued, followed by blindness. This was one of the most melancholy cases I ever witnessed. The subject of it was a man moving in the middle ranks of life, and not more than forty years of age, with a constitution naturally irritable, but unimpaired by any excesses. Some misfortunes in business laid the foundation of his subsequent sufferings; and, after enduring much trouble of mind, and great privation of comfort, he became "so nervous" (to use the common phrase,) that all his exertions to recover his losses became futile, and he was at length utterly incapacitated even from any endeavours to support his family. It was at this period that I first saw him, and feeling naturally for his most melancholy condition, I paid more attention, perhaps, to the case, than I otherwise should have done. His symptoms were then very interesting and characteristic. His head was constantly "uneasy," to use his own expression, occasionally painful, sometimes giddy, at others full of strange and disagreeable noises; all these symptoms evidently pointing out the existence of excessive determination of blood to the brain. His pulse was full, strong, and occasionally hurried; but not increased greatly in frequency. His strength was much diminished, and his spirits so depressed, that while his wife was describing his symptoms to me, the poor fellow cried like a child, and told me, when I advised him what was best to be done, that "I was very kind, but it was of no use."

His digestive powers were considerably weakened, as were, indeed, all those functions, the due performance of which depends upon nervous energy, regularly supplied and properly directed. At this time, too, he began to experience those sensations of tingling, followed by numbness of one side, which have been termed in the aggregate, *Aura Epileptica*; in short, he was afflicted in a striking, but lamentable, degree with all those symptoms which indicate and usher in Paralysis: and the short description which I have given of his case, will afford a sufficient index to the approach of these dreadful maladies, from whatever cause they may originate. It is in such lamentable cases as these, that the humane practitioner must indeed regret his inability to afford relief by the exercise of his professional skill; but, however deeply he may pity the fate of the patient, human power will avail but little, even in mitigating his miseries.

These, then, are the more prominent evils which depend upon an excessive determination of blood to that important organ the brain, as connected with the subject of Nervous Disorders. I have now to consider the second class of symptoms, those, namely, which are not dependent upon previous mischief in the brain, but which, nevertheless, are equally distressing to the patient, and equally worthy of the attention of the practitioner.

I have already intimated that the symptoms of



Nervous Disorders are numerous, changeable, and perplexing. Their character, in this respect, is more particularly marked at the commencement of these maladies, than when they are more advanced, and there is then a possibility, from observation and experience, of classing them into some degree of order.

A general restlessness and uneasiness, accompanied with great irritability of temper, and a consciousness that all is not right, are among the foremost indications of the coming evil. An inaptitude to follow customary avocations, and a want of energy and spirit in all that is done, are now also evident symptoms: and if particular attention be paid by the patient to his own sensations, he will discover a feeling of uneasiness and distention about the heart and stomach, which may be relieved for the moment by pressing the hand heavily over the regions of these organs. The sensation is sometimes described as a feeling of tightness and obstruction; at others, as a sense of weight and fulness.

This symptom usually indicates some derangement in the stomach; and may depend either upon wind, or an acidity, caused by bad digestion. If it depend upon wind, the expulsion of the flatus removes the evil; if upon acidity, the following symptoms occur. The patient will complain of a sour "rising" in the throat, leaving a degree of heat and pungency about the root of the tongue, which frequently induces a tickling cough, and is most

commonly attended with heart-burn. The appetite becomes irregular, and the taste capricious ; and, while the patient feels inclined to sit down to a meal with eagerness and pleasure, either the smell of the viands, or some other cause, checks the inclination, and the food is oftentimes left untouched, or but slightly partaken of. There is rather a curious fact connected with this state of the appetite, which will apply, by the way, to the earlier stages of Nervous Disorders generally. The patient is always more indisposed in the morning and fore part of the day, than he is towards the evening. He rises from his bed unrefreshed by sleep, listless, and extremely uncomfortable : eats no breakfast, and but little dinner ; and it is not until the effect of medicine shall have had some influence, and the patient's mind have become more occupied with passing events, or in the company of his family and friends, so that he shall, for a time, forget his sufferings, that he feels a respite from sensations which are harassing in the extreme.

All this indicates derangement of the stomach ; and the evils to which it subjects its victims, are continually adding to the mischief by rendering them incapable, to a certain extent, of using the proper medicines. Nausea is another distressing symptom, occasionally terminating in vomiting, by which more or less of mucous, or phlegm, is ejected from the stomach, affording a temporary relief to

the patient. I cordially agree with Dr. James Johnson, that these evils depend upon an irritable state of the *nerves* of the stomach; which, I think, is borne out by the fact, that this vomiting is more apt to occur when the stomach is empty, than when it contains food: the taking of food, indeed, instantly relieves it. Assuming this as the fact, we have a clear clue to the mode in which the sympathy of a deranged stomach is propagated to the brain, and thence, by means of the nerves, throughout the whole body. At all events, this is a clear explanation of the matter, and it affords a very excellent foundation for much practical reasoning.

With this state of stomach the whole of the intestinal canal participates; assuming, in its functions, the same capricious irregularity. At one time the bowels will be obstinately constipated, notwithstanding the use of active purgatives, without which, indeed, the patient might pass several days without an evacuation. At others, a troublesome and debilitating diarrhœa will prevail, creating much disturbance in the system. Occasionally the constipation is spontaneously relieved by a copious discharge of dark green, offensive, pasty matter, affording a temporary respite from many of the symptoms dependent upon this deranged, irregular state of the bowels. There is one symptom, which may be mentioned here, as somewhat characteristic of this irritability of the Nervous System: it is that of a most copious secretion

of urine. By the older physicians this was looked upon as a very important and marked symptom, and a great deal of discussion as to its cause was the consequence. I have, in the chapter on Physical Sympathy, stated, that the secretion of this fluid is very much influenced by the different emotions of the mind; and it is to this cause, that it may be referred, in nearly every instance in which it occurs. It is an affection to which no great attention need be paid; as it neither indicates danger, nor is it attended with any great inconvenience. The practitioner, however, will do well to observe it, as it may throw additional light upon the particular condition of the patient.

With the derangement of the alimentary canal, there is considerable irregularity of the circulation; and the patient is constantly referring to his pulse in order to convince himself and others that his case must be very grievous. A striking characteristic of these Disorders, is a never failing anxiety on the part of the patient to be considered "very bad." You cannot offend some nervous patients more deeply than by commending their good looks, and congratulating them on the soundness of their health. An answer to this calumny, for so it is considered, is a reference to the pulse, and a long detail of symptoms, which the unfortunate practitioner is compelled to hear with patience, if he can; but at all events, with some assumption of that necessary

and useful virtue. It is not difficult to understand how, in these nervous cases, where the sensibility of the frame is so morbid and exquisite, the pulse should be so greatly influenced by the feelings of the patient. On the least emotion, or the most trifling agitation, the heart flutters, and communicates a vibration to every artery in the body; so that an unkind look, a pettish word, or even a slight contradiction, will “flurry” a patient thus afflicted, and immediately affect the pulse.

Connected with this state, but not always dependent upon it is that distressing symptom—palpitation of the heart. This has given rise to considerable alarm, as supposed to be indicative of some organic affection of that important organ; but in most instances it is merely the effect of that nervous irritability, which affects all the organs of the body to a greater or less extent, and which causes only a temporary derangement of function. It will depend, also, very considerably upon the actual state of the stomach: as it may be produced by acidity, by flatulence, by indigestion, or by any other cause of stomachic irritation.

I have known, also, another very distressing symptom occur under similar circumstances; that, namely of a *beating* or *throbbing* over the whole body, especially upon lying in a recumbent posture. This I have observed in two or three instances, where the nervous affection depended upon indigestion with an obstinate obstruction in the liver and bowels.



And here a very important subject presents itself to the consideration of the practitioner, as well as of the patient: the distinction, namely, between those affections of the heart which depend upon an alteration of its structure, and those which do not. There are many nervous disorders which put forth symptoms, that would lead an inexperienced or unreflecting practitioner to infer that the structure of this important organ was deranged, to such a degree as to preclude all hope, or possibility, of its amendment. I need not observe, that in these cases the utmost care and circumspection should be given to their management, as well as the most cautious opinion given as to their termination. A diseased heart, such as some nervous symptoms would seem to indicate, would be incurable, and tend eventually to the certain destruction of the patient; and on this account the practitioner ought to be well convinced of the fatal mischief, before he ventures to decide the destiny of his patient, by disclosing his dreadful condition.

A most extraordinary case connected with this very subject, occurred a few years ago in the person of a physician of some eminence in this metropolis. A long period of mental irritation and anxiety induced all the symptoms which denote that terrible malady, *Angina Pectoris*.\* There was the hurried,

\* This disease depends generally upon the ossification of the blood-vessels that nourish the heart, and its symptoms are woe-

gasping respiration, increased in difficulty by the most trifling causes, and especially by walking up stairs; there was the sense of fulness, oppression, and constriction about the heart and chest; the spasm shooting across the breast to the arms, and increasing occasionally to such an extent as to threaten instant suffocation,—with other symptoms indicative of that dreadful malady. But, after struggling with so terrible an enemy for some months, the symptoms gradually declined, until they eventually altogether left their victim, who now enjoys a very tolerable share of health. In this case, it is fair to presume that no organic mischief existed; for had the heart been diseased to the extent which the patient's symptoms indicated, no cure could have been effected. The evils, therefore, must have depended upon an extreme degree of nervous irritation, affecting the action and sensibility of the heart, to an extent quite as painful as that which would have occurred from positive structural derangement.

This irregular condition of the circulation, which is induced by nervous irritation, is also occasionally attended by *syncope*, or fainting. This temporary suspension or diminution of vital action, may be caused by any extraordinary exercise or exertion, or by the more impressive passions of the mind—as fully aggravated by any cause which increases the force of the circulation.

grief, sudden surprise, anger, fear, &c. It is a most distressing and alarming symptom, as it depends so much upon those mental affections, over which neither the patient nor the practitioner has much control. Fainting, also, is closely allied to hysterical affections; and very frequently precedes them: and this leads us to the consideration of this unpleasant malady.

This malady is generally considered peculiar to the female constitution; the older physicians attributing its existence to some affections of the interior organs, probably because a suppression of the menses is an usual attendant. This, however, like every other view in the infancy of medicine, is very narrow and empirical. It is very true that there is some peculiarity in the female constitution, which renders it more susceptible of hysterical affections than the male; but I have seen young men, of a certain temperament, afflicted with attacks of Hysteria, as well defined and as perfectly characteristic as any with which females may be visited; and from analogous causes. The more violent forms of this malady can only occur in those highly sensitive females, in which the irritable temperament is strongly marked; but the milder forms may happen to almost every female, under certain circumstances. In every variety of it the head is more or less affected, as may be understood by the character of the symptoms. In the more severe cases, the patient throws

herself wildly about, or uses her arms and legs with a degree of violence, of which, in a state of health, she would be incapable; she gnashes her teeth, clenches her hands, and cries and laughs alternately, and involuntarily. In some cases the parts concerned in respiration are strongly affected, their functions being interrupted, and sometimes nearly suspended by a spasmodic stricture of their whole machinery. This becomes suddenly relaxed; and the patient, unable before to breathe freely, now begins to sigh deeply, and then falls into a slight stupor, appearing almost like a sound and tranquil sleep. From this she will start up, either spontaneously, or from some trifling cause, into another fit of convulsions, which ends as before, till, by degrees, the paroxysm appears worn out, and the whole ceases. During this stupor the patient frequently hears and remembers what has, sometimes very incautiously, been said by the by-standers.

In the slighter cases, the patient will only feel nervous and uncomfortable; experiencing annoyance and derangement from the most trivial circumstances,—even a look or a word: while her spirits will be very variable, being suddenly raised or depressed without any apparent cause. In these cases the most troublesome symptom to the patient is that fulness about the throat, which is known by the name of *Globus Hystericus*, or the hysterical ball. This may be described as a sensation of a ball

gathering in the bowels, and rising gradually till it fixes itself in the throat, just below the root of the tongue, threatening suffocation. This is caused by a spasmodic affection of the parts about the throat, through the medium of the nerves, similar to that affection which occurs in lock-jaw (*tetanus*), and Hydrophobia.

The immediate or exciting causes of Hysteria are those which inordinately increase the action of the heart, as heat, highly stimulating food, luxurious habits, with certain emotions of the mind. I have known it, however, produced by a superabundance of electric fluid in the atmosphere, both before and during the continuance of a thunder-storm; and in individuals who were not in the least alarmed at the thunder itself; nor in any way inconvenienced by it, excepting in the manner I have mentioned. In these instances the *Globus Hystericus* has been very annoying and characteristic; and the alternate fits of laughing and crying very urgent; without leaving the patient, however, much affected by the attack, further than by a general sensation of "nervousness,"

These are the most ordinary physical symptoms, occurring under various modifications; and exhibiting themselves under various forms and degrees of intensity: the observant patient will feel convinced of the accuracy of the delineation, if she has been subject to their remorseless visitation.

Nervous patients are terribly annoyed by profuse



perspirations, particularly at night ; and I have been frequently told, that if they were plunged into a bath, they could not be more wet. I have already explained the intimate sympathy which exists between the skin and the stomach ; and I have invariably observed, that in those cases, where there was much derangement of the digestive organs, the most excessive perspiration occurred ; the patient being compelled to change his linen two or three times in the four and twenty hours. In a case which I have now under my care, the most distressing symptom is this profuse perspiration. The patient, a lady of rather advanced years, and exceedingly corpulent, is bathed morning, noon, and night, in perspiration, which she most sedulously encourages by persisting in a diet and regimen, the very reverse of that which her medical attendants have endeavoured most strenuously to recommend to her. This case originated in indigestion and irritability of the stomach and bowels, and it has been attended by some very distressing symptoms of extreme nervous derangement : at present there is no structural disorganisation ; but if we should not succeed in conquering the malady, the constitution will eventually sink under the influence of the disease.\*

We come now to the consideration of certain

\* While these sheets were going through the press, this prediction has unhappily been verified. The patient died about two months ago of Paralysis

mental affections, as connected with, and particularly characteristic of, these Protean disorders.

I have already described a certain restlessness, irritability, and despondency, as indicative of a deranged state of the digestive functions: these evils, however, are very much augmented, as the malady gains ground: and the patient's judgment becomes so much impaired as to render him perpetually apprehensive of some terrible and inevitable danger. It is this unhappy delusion, which so frequently impels individuals possessing every comfort and enjoyment which this world can furnish, to destroy themselves by their own hands, that they may, according to the idea generated by their morbid imaginations, avoid the evils which are surely impending over them. Penury and disgrace, and absolute ruin, are misfortunes which they cannot avert by any other means; although they may, with their wealth, command any luxury that man may covet: and it is utterly useless to reason with them. "I have known," says Dr. Walker, "several persons, even at the time they were surrounded by affluence, tormented with the idea of coming to penury, and of dying in a jail." The imagination is, also, affected in another and more absurd manner. Persons have imagined themselves converted into stones and statues, into glass or China images, and have been afraid of moving, lest they should be dashed to pieces by an unlucky fall, or an unfortunate colli-

sion. Some patients have conceived themselves so hugely enlarged in bulk, as to be unable to enter a carriage, a gate, or a room; while others, carrying about with them an immense "mountain of flesh," have fancied themselves absolute counterparts of Pharoah's lean kine.

The memory and recollection are also very much affected in extreme cases of nervous disorder. Sometimes the recollection is so impaired, that the patient has totally forgotten where he has been, or whither he is going, losing, at the same time, all recollection of his "familiar friends," and of those places which he has been in the habit of constantly visiting. And, what may appear very strange, the patient is conscious of this distressing fatuity; a consciousness which, as may be supposed, very materially adds to his sufferings, while it does not tend to the more lucid arrangement of his ideas.

A deep, prevailing, and overpowering dejection of spirits, is one of the most distressing symptoms of this advanced stage of nervous disorder. All the glad enjoyments of life are poisoned by it. The solicitude of friends—the affectionate endearments of those most beloved by us—the common courtesies and interchanges of society are rendered irksome and tormenting, and that miserable and sad state is established, which is called Hypochondriac. "Do not teaze me!" was the constant exclamation of the most amiable and excellent physician which modern

times have witnessed, when after a “round” of worry and fatigue, he returned to his home, to seek a temporary respite from his labours and anxiety. And it was not until a glass of wine, or some similar stimulus had been administered to his exhausted frame, that he was enabled to say, “Thank God ! I am better now ! and can attend to the endearments of my family.”

With this lamentable condition a greater or less degree of irritability is invariably commingled. The temper of the patient is quick, irritable, capricious, and peevish. He is pleased with trifles, while those circumstances which at other times have afforded him the greatest delight, excite his anger, and render him uncomfortable and unhappy. Mistaking the motives and actions of those around him, he is perpetually misconstruing the most kindly attentions ; and then, conscious of his injustice and his harshness, he apologises for his irritability, while he laments the causes, thereby adding another pang to the sufferings which he experiences. The moralist might deduce an instructive lesson from this sad state of affliction, in considering the insufficiency of wealth, in producing that happiness which can alone depend upon the health of the body, and the perfect, undisturbed, and active exercise of the functions of the mind. Man was not made, it should seem, to enjoy satiety ; and some sort of dependence on his species appears

necessary to insure that comfort, without which, existence can scarcely be endured. Excitement of some kind is absolutely necessary to the due exercise of the faculties with which Providence has blessed us ; and that excitement can neither be temperate nor well adapted, in many cases of confirmed satiety. Wealth is an object of universal ambition ; but its successful satellites are subjected to many evils, which never annoy nor distress its more humble votaries ; and were it not for the magic influence of this all-powerful deity, the wise man would rather shun its favours, than court and possess them, with their train of attendant discomforts.

It is not difficult to perceive, that a long continuance of this distressing state of mind may induce an aberration of intellect of sufficient intensity to constitute actual insanity ; but this cannot well take place, unless the brain is physically affected, so as to destroy its balance and perceptive power, either by increasing the sensibility of that organ, or by rendering certain parts of it unfit for the performance of their functions, while other parts have their power unimpaired, or, perhaps, even morbidly increased. The false perception which is the fruit of this mental aberration, has given rise to many strange and fanciful illusions, and to many of the more precise relations of ghosts and apparitions, as we may judge from Nicolai's narrative, already quoted. This state of melancholy madness is one of the most distressing



varieties of insanity, and one which seldom admits of more than a slight and temporary alleviation. To the friends it is a source of great anxiety and tribulation, and to the patient a cause of constant misery and apprehension.

I have now, I believe, entered as minutely into the Symptoms of Nervous Disorders as is consistent with my plan. In concluding this part of my subject, I must observe that there is an infinite variety in the manner in which these different symptoms appear; as well as in the degree in which they affect different individuals. In some cases, many of them will not exist at all; in others their intensity will vary so much, as in great measure to alter their character. To these variations, however, the practitioner must attend, so as to be enabled successfully to combat them, and to afford that relief which his patient expects to receive from him.

## CHAP. V.

### METHOD OF CURE, WITH A DISSERTATION ON THE BEST MEDICINAL AND DIETETIC REMEDIES.

It will be readily believed, that maladies so complex, capricious, and perplexing in their character, as Nervous Disorders, are difficult to cure—the difficulty being in proportion to the complexity and number of the symptoms. It is even so ; and there is no class of diseases, the treatment of which requires so much judgment, perseverance, and patience, on the part of the practitioner ; for here we have the mind acting upon the body, and the body upon the mind, with an endless reciprocity of evil. But as every wise man will simplify his practice as much as possible, all that the medical attendant has to do, is to combat the symptoms judiciously, as they appear,—to encourage the patient with the healthiest of all feelings—Hope—and to attend most carefully to the changes which are continually going on in the nervous, irritable constitution.

The method of cure is divided between the practitioner and the patient—the latter, indeed, having

as much to do in effecting it as the former ; for while the practitioner regulates and administers such medicines as are requisite, the multifarious arrangements respecting diet and regimen are to be managed entirely by the patient himself, under the direction, of course, of the medical attendant. Sir Charles Scarborough's advice to the Duchess of Portsmouth, conveys, in a very laconic manner, a very admirable lesson : " You must eat less, take more exercise, take physic, or—be sick ;" and, from whatever cause Nervous Disorders may arise, this rule must be a golden one to the sufferer. We all eat and drink too much ; we are all too *physically* idle ; we do not pay sufficient attention to the *outgoings* of our bodies, and we are—nervous ! What ought we to do then to prevent this ? Radically reform our habits, and take Sir Charles Scarborough's advice. If we have fortitude and resolution to do so, we shall abundantly benefit by it :—if not, we must endure our sufferings,—“ be sick.”

Diet and regimen, then, being the most important matters to be considered, we shall direct the reader's attention to these requisites first, and then proceed to the medical portion of our plan.

With regard to diet, a person in robust health, of a good constitution, and untroubled with the bugbear of a bad digestion, may do any thing : but the case is very different with those individuals who suffer from Dyspepsia, and whose sufferings are

sometimes very considerably increased by the most trifling deviation from the prescribed plan. To a person in good health, there can be no better rule than that laid down by Dr. Kitchener, in his entertaining little volume, on the “Art of Invigorating and Prolonging Life,”—that is, to eat and drink only of such food, at such times, and in such quantities, as experience has convinced you agree best with your constitution, and absolutely to avoid every thing else. This, to a certain extent, will serve as a guide also to the invalid; but with him the utmost caution must be used; and information as to articles of diet becomes a matter of primary consideration. We can form some idea of the deep interest of this subject, when we consider how eagerly the works which treat of it are perused; and have only to instance the books which have been written by Drs. Johnson, Kitchener, and Paris, not omitting Mr. Abernethy’s admirable tract upon the “Treatment of Local Disorders.” From this we also perceive how intimately the stomach is connected with our maladies, and how exceedingly important it is that its functions should be well and duly performed. This I have already explained, as well as the evils arising from bad digestion, and it now remains for me to point out the best mode of correcting these evils, supposing them to exist. Let me premise, however, that indigestion is not necessarily a symptom of nervous derangement, although it is most frequently a con-

comitant affection; when it does exist, there is always more or less of nervous irritation accompanying it.

#### DIET.

The object of eating ought not to be exclusively the satisfying of the appetite. It is true that the sensation of hunger admonishes us, and indeed incites us, to supply the wants of the machine; and that the abatement of this sensation betokens that such want has been supplied: so far the satisfying of the appetite is a matter of consideration; but a prudent person will observe the mode in which the appetite is best satisfied, and the frame at the same time more abundantly nourished,—for this ought to be the chief object of feeding. There is much truth in the homely adage, that “what is one man’s meat is another man’s poison;” and a person who has been *muscled*\* will, if he wishes to enjoy his health, rigidly eschew that piscatory poison. So, also, will

\* We frequently hear of people being *muscled*; and it is generally supposed that the mischief is produced by some poisonous quality in the fish. I have seen many cases, but I could discover nothing to confirm this popular opinion. In some instances only one of a family has been affected, while all partook of the same muscles. I have known exactly the same symptoms produced by pork, lobsters, and other shell fish, and can attribute them to nothing more than an aggravated state of indigestion, dependent of course upon the peculiar condition of the patient’s stomach.

The medical reader will find a very able paper on this subject in the “Transactions of the Associated Apothecaries of England and Wales;” written, if I remember rightly, by the late Mr. Haden. It is a paper that merits a very attentive perusal.



an individual with a bilious habit avoid fat pork, although his appetite may prompt him to eat it ; and those whose stomachs are flatulent, will not inordinately indulge in vegetables, however greatly they may feel inclined to do so. Captain Barclay, whose knowledge in such matters was as extensive as that of most persons, informs us, that our health, vigour and activity,—to which he might have added, our comfort,—must depend upon our diet and exercise.

A leading rule in the diet of a nervous patient, is never to overload the stomach ; indeed, restriction as to quantity, is far more important than any rule as to quality. We have already shown, that in many instances, the nerves of this organ are in a high state of irritation ; and it is evident, therefore, that any oppression of the organ under such circumstances must prove extremely hurtful. It is bad at all times to distend the stomach too much ; for 'it is a rule in the animal economy, that if any of the muscular cavities, as the stomach, the heart, the bowels, or the bladder, be too much distended, their tonicity is weakened, and their powers considerably impaired. This, by the way, is an old doctrine, and the principle of Mr. Abernethy's plan of treatment is founded upon it. Dr. Bailey, who wrote a judicious tract on the Preservation of the Eyesight (16mo, 1673), remarks that, "it is holden better to drink oft and small draughts at meat, than seldom and great draughts, for so meat and drink will better mingle." The

swilling of the stomach is a great evil; especially if the fluid be acrid or stimulant. It is the quantity more than the quality of tea, which so frequently debilitates the stomach; not but that strong green tea possesses a sedative virtue, and that to a very considerable extent; but when the stomach is distended with a pint or more of fluid,\* its functions are oppressed, and a debility of its tone or of its elasticity ensues.

The consideration of diet might be rendered very simple, if people would but make it so. I shall not go so far as to weigh the quantity, although in some cases, even this exactness would not be irrelevant; but, as it is an object of the highest importance to point out that species of food which, eaten in small quantities, produces the greatest nutriment, the reader must excuse any apparent prolixity in the detail.

From the volumes which have recently been written on Diet and Digestion, we might gather the alarming information, that nearly every thing we eat is pernicious—that is, pernicious to a deranged stomach. Far be it from me to adopt such a discouraging theory. My present object is rather to point out what is good, than to stigmatise what is bad—to afford the patient, if I can, the means of

\* Blumenbach, in his *Physiology*, informs us that the human stomach of the adult is capable of containing about three quarts of fluid. I presume the measurement was made after death, as no living stomach would bear such cramming.

comfort and enjoyment, and not to tell him of his sufferings, or of the means of increasing or prolonging them.

In most cases, a spare diet is extremely pernicious to a nervous patient; so also is a stimulant one. By adopting the “*in medio tutissimus ibis*,” of the poet, and steering judiciously between both, we shall attain our object, and the body will be nourished, refreshed, and invigorated, without being oppressed, discomforted, and heated. To “eat a little and often,” is a rule frequently followed, because it is in accordance with the feelings of the patient: but, as we shall presently see, it is a very bad rule, and fraught with infinite mischief. Before the food is half digested, the irritable nerves of the upper part of the stomach will produce that sensation, which is familiarly termed “craving;” but it is sufficiently evident, that to satisfy this “craving” by taking food, is only to obtain a temporary relief, and not always even that, at the expence of subsequent suffering. There can be no wisdom in putting more food in the stomach than it can possibly digest; and as regularity is most conducive to the restoration of the health of a debilitated frame, it is better that the food should be taken at stated periods. I do not by any means interdict the use of meat. On the contrary, *fresh* meat, especially beef and mutton, if taken temperately, affords a vast portion of nutriment in a small compass. “Re-

member," says Dr. Kitchener, "that an ounce of beef contains the essence of many pounds of hay, turnips, and other vegetables;" and this fact must be observed with regard to meat—that nothing comes to perfection under a stated period of growth; and until it attains this period, it will, of course, afford inferior nourishment. Beef and mutton are consequently better than veal or lamb, or young pork—better, as containing more nutriment, as well as being more easily digestible, the fibre being looser and more coarse. To this such vegetables may be added as are easy of digestion, and as usually agree with the individuals. If the stomach and bowels be very irritable, and their powers much impaired—if the tongue be dry, and its edges more than commonly red, the vegetable diet ought to be considerably restricted. Peas, beans, the different kinds of greens, and all raw fruit, should be avoided; and potatoes, properly boiled with turnips and carrots, ought to constitute the only varieties which the patient should eat. I have seen the skins of peas, the stringy fibres of greens, and the seeds of raspberries and strawberries, pass through the bowels, no further changed than by their exposure to a slight degree of maceration: and I need not now point out the irritation which their progress must have produced, as they passed over the excited and irritable surface of the alimentary canal.

As to the times of taking food. These will, of

course, depend very materially upon the habits of the patient; but this ought in all cases to be observed, that the stomach should be in a state of perfect repose when food is put into it. The stomach may be unfit for the reception of food, from the general fatigue of the body, in which, of course, it sympathises; or from being itself fatigued with its own exertions. And this will lead me to explain what I meant by calling the rule to “eat a little and often,” a bad one. It is calculated that in health a moderate meal is digested in three hours; and, sometimes, if the stomach be very weak, it may be longer. Before the expiration of this time it is wrong to put more *food* into the stomach; and if the patient feel a craving, or a sensation of “sinking,” during this time, he will experience decided relief from a dose of some warm stomachic medicine, and decided discomfort from cramming himself with food. “Instead of pursuing a rational plan of diet,” observes Mr. Abernethy, “many persons are taking food every third or fourth hour, pleading in excuse for such conduct, that they cannot do without it. The truth is, that when the stomach is disordered, the exertion of digesting a single meal, after its excitement and efforts have ceased, is productive of sensations of languor, sinking, and inquietude, which ought to be calmed, or counteracted by medicines, and not by food; for a second meal cannot be digested in this state of the stomach. We also often tease and dis-



order our stomachs, by fasting for too long a period ; and when we have thus brought on what I may call a discontented state of the organ, unfitting it for its office, we sit to a meal, and fill it to the utmost, regardless of its power or its feelings. The rule, then, for diet, may be thus summarily expressed. *We should proportion the quantity of food to the powers of the stomach, adapt its quality to the feelings of the organ, and take it at regular intervals of six or seven hours, thrice during the day."*

This, then, comprises the whole secret of Diet ; and if people would but strictly follow this plan, healthy stomachs would retain their full powers, and weak ones become invigorated.

I have said, adopting Mr. Abernethy's words, that the quality of the food should be adapted to the feelings of the stomach. I have also said, that it is not of so much consequence as the quantity. Every person, and especially every nervous person, knows what it is to *fancy* certain articles of diet ; and this is what is meant by adapting our food to the feelings of the stomach. Medical men in general seem to entertain a great abhorrence to the indulging of these fancies, for it usually happens, that the objects of them are certain *piquante* articles, not contained in the orthodox catalogue of dietetics. But, unless the article be very preposterous, let it by all means be eaten. Mr. Abernethy, one would have imagined, would have vanquished the absurd prejudices con-

nected with this matter long ago. "Numerous instances," he says, "might be mentioned of apparently unfit substances agreeing with the stomach, being digested, and even quieting an irritable state of stomach, merely because they were suitable to its feelings. Instances might also be mentioned of changes in diet producing a tranquil and healthy state of stomach, in cases where medicines had been tried in vain. Neither can such occurrences excite surprise; for as digestion and the consequent tranquillity of the stomach depend on a proper quantity of healthy juices being secreted and commixed with the food, such secretions are likely to be produced by whatever agreeably excites it; and obstructed by whatever has a contrary tendency."

I am afraid that the books which have been recently written on Diet, although containing a vast store of interesting information, have proved rather detrimental to the invalid, than useful; because, by submitting all edible articles to the laws of Chemistry, the result has proved, that there are few substances which do not possess some noxious property. When Mr. Accum published his book, with that fearful motto—" *There is death in the pot;*" all the world was frightened at the communication, and regarded the most ordinary compound substances with extreme suspicion. They may now look with an eye equally distrustful upon the different species of meat and vegetables; for Chemistry will detect in

them some properties, not, indeed, of sophistication, but prejudicial—that is, *chemically* prejudicial—to a weak and dyspeptic stomach. But it is wrong to discard the influence and injunctions of habit, and we ought not to disregard the admonitions of our inclinations and feelings. If the hypochondriac cannot take food without referring to some established work on Diet, wherein he shall find how much of digestible, and how much of indigestible matter is contained in this or that article of sustenance, his situation is very similar to that of a child in leading strings; and his fears will be constantly excited by the danger of transgression. Truly, there has been much nonsense thrust upon mankind by these minatory denunciations against eating and drinking; and our habits and feelings, and even our most innocent inclinations, have been exposed to the action of the crucible, and denounced as perilous. Again, we repeat, that the proper restriction lies in the *quantity*; and that our “fancy” is often the best guide as to the *quality* of our food. It is one of the worst things in the world for a nervous or dyspeptic patient to tease himself about his stomach, by submitting his food to strict analyzation. As surely as a man talks, or thinks, thus about his stomach, so surely will it go wrong; for, in the same manner as it digests such food as we “fancy,” so will it *not* digest that which we believe to be pernicious.

Thus much, then, for eating; and now we come

to consider drinking. As inordinate eating has been so loudly anathematized, so also, has drinking, and with the same bigotry, violence, and indiscrimination. I have already shown that not only is stimulus harmless to the human stomach, but that it is useful, and even, in many cases, actually necessary. Of course, if taken to excess, fermented liquors, like every thing else, become pernicious; but it shows no wisdom to condemn the *use* of meat and drink, because their *abuse* is attended with ill effects. Why should we “act and feel as if this bountiful world, brilliant in beauty, and overflowing with blessings, was a collection of steel traps and spring guns, set to catch the body and shoot the soul?” Is it not much better and wiser to avail ourselves of the many blessings which Providence has placed before us, than to set ourselves to work, to detect poison in our drink, and God knows what in our meat? It savours of learning, doubtless, to do all this—but *cui bono*? where is the real utility and benefit which it produces? Our grandfathers and their progenitors were well convinced that a good cup of “Sherris sack” comforted the heart, and aided digestion; and why the same opinion should not govern us, I must leave to the chemists to decide.

The moderate use of wine and of malt liquor is exceedingly grateful to our feelings, and abundantly beneficial to our constitution; but ardent spirits are found to be so pernicious to most constitutions, and

especially to those of the inhabitants of crowded towns and cities, that, excepting under peculiar circumstances, it is better to discard them. A glass or two of good wine can never do harm; neither can a cup of good, genuine, “humming” ale. The chemists tell us that the London ale is a horrid and narcotic compound: and so in truth, by far the largest portion of it is. But there are two or three honest men in the metropolis who sell genuine Kennet and Nottingham ale, from whom it is very easy to procure it, unmixed and pure.\* If, however, malt liquor does not agree with the stomach, or what is the same thing, is *supposed* not to agree, it is an easy matter to substitute wine for it.

Connected, in some degree, with this subject, is the use of condiments and spices. In many cases, the stomach is so weak, as to render their use necessary—in no case can they be pernicious—unless, as a facetious friend has observed, “a man peppers himself to death.” A man may, it is true, stimulate his stomach into inactivity, just as a man may ride his horse to death; but this is the *abuse* of condiments—not their *use*. Sauces, too, have been cried

\* The best *Kennet* ale is to be had either at Sherwood’s, in Air-street, Piccadilly, or at Chapman’s, in Wardour-street; both of these dealers have it direct from Kennet. Very good *Nottingham* ale may be procured, in casks, at Sansom’s in Dean-street, Red Lion Square. He has two sorts,—the old, and the new.



down as pernicious and poisonous, and with the same injustice. The richest of sauces is gravy, and gravy is the gelatine, or glue of meat, extracted by heat, or by solution in water. This, surely, cannot contain *much* poison. The other sauces are composed of nothing but what we eat in some shape or other every day of our lives—butter, fried with flour, or butter boiled with flour, with a table-spoonful of lemon juice or vinegar, or an atom of salt or pepper, the grating of lemon-peel, an anchovy, or the juice of a mushroom. “Such are the ‘rich sauces,’ which lay their poison in ambush in every dish.—Men have died, and worms have eaten them, but not of ‘rich sauces.’”

Our rule, then, for the diet of the nervous invalid, who is not suffering from any organic affection, is simply this.—To take such nourishing food as he “fancies.” Not to load his stomach too much; and, in order that it may perform its functions properly, to take this food at intervals sufficiently remote to insure the perfect repose of the organ, and its consequent capability to digest its contents. This is the simple, straight forward, easy rule; and that it may be more comprehensible, and, I trust, more readily observed, I will just sketch out a plan of diet for one day; and let it be remembered, my plan is for a weak, and not a strong and healthy stomach.

For *breakfast*, tea, coffee, cocoa, chocolate,\* or

\* Chocolate, prepared in the usual manner, with milk, is too

milk, may be taken, with either an egg, or some cold meat. I consider meat for breakfast exceedingly wholesome and invigorating, particularly for those whose occupations are active and laborious. Supposing this meal to be taken at nine o'clock, we should permit at least six hours to elapse before the stomach is again excited by food; I say by *food*, because medicine may be administered intermediately, in conformity with what I have already said on that subject: but of this I shall speak presently.

About three o'clock, *dinner* may be taken; and this may consist of any nourishing articles that the invalid may fancy. I will not stipulate for the *quality* of the food, any further than that it be nourishing and easy of digestion; it may consist of fish and meat, or meat and light pudding, or broth and meat; but the *quantity* ought never to encumber the stomach. With a weak and irritable stomach, it is much better to rise from table with the appetite not completely satisfied, than to run the risk of repletion. The sensation of hunger in a moderate degree is not unpleasant, at all events, it is not to be compared to the disagreeable sensations produced by indigestion. With *dinner*, from two to three glasses of good wine, white or red, according to circumstances, or half a pint of good ale, may be taken;

rich for many stomachs; but *Fry's* powdered chocolate (not Strickland's) is a very delicious beverage, mixed with water, as directed by the label.

and after all, the most perfect quietude must be observed, extending even to sleep, if there be an inclination for it, for at least three hours. At the expiration of this time, tea or coffee, not exceeding half a pint in quantity, will be found a good substitute for medicine, in comforting the stomach, after its fatigue of digesting the dinner. If there be great debility of this organ, a dose of stomachic medicine may be taken two hours after tea, which will be about one hour before the last meal, or *supper*.

This may consist of some bland, farinaceous substance, as Arrow root, sago, panada, gruel and milk—that is, gruel boiled in the usual way, and then mixed with an equal portion of cold milk.\* To these a small portion of wine may be added, if necessary; and this meal ought to conclude the diet of the day.

From this it will be seen that our plan is sufficiently simple, and, what is equally important, sufficiently generous. The Sangrado practice is inconsistent with good sense, and incompatible with the bountiful operations of Nature. Of course there *are* cases where the most severe abstemiousness is necessary, but these cases are not “nervous;” neither do they come in any way under our present consideration.

Having repaired the wants of our frames by eating

\* The best way of making gruel is with the *powdered* groats, sold by Robinson, of Red Lion Street. They are pure, will keep for a long time, and may be converted into gruel in a few minutes.

and drinking, we come now to consider the question of *Sleep*,—the general restorative and renovator of the body.

A great deal has been said about the necessary quantity of sleep—that is, how long we ought to indulge in sleeping. Now this question, like many others, cannot be reduced to mathematical precision, for much must depend upon habit, upon constitution, and upon the nature and duration of our occupations. A person in good health, whose mental and physical occupations are not particularly laborious, will find seven or eight hours' sleep quite sufficient to refresh his constitution. Those whose constitutions are debilitated, or whose occupations are studious and laborious, require somewhat more; but the best rule for the invalid is to sleep till he is refreshed, and then get up.\* If he feel inclined for more sleep during the day, let him indulge—for nothing is so important to nervous invalids—nothing so sedative and refreshing—as sound and uninterrupted sleep, however short it may be. People ridicule and censure the habit of sleeping during the day; and especially after dinner: but is it not better—we

\* I knew of a gentleman of very good family, who lived till he was upwards of eighty years of age; and for the last forty years of his life, I do not think he ever went to bed sober. But his plan was, to rise the instant he woke in the morning, no matter at what time, and to spend the greater part of the day in the open air.

speak, be it remembered, of the invalid—to go to sleep for half an hour, than to go on noodling all day, as Dr. Kitchener calls it, in a nerveless and semi-superannuated state? The inhabitants of South America\*, and of Spain, are a wise and provident race. They enjoy their *Siesta*, and sleep away the sultry hours of their existence, and they digest their food, and enjoy their health more comfortably in consequence. In sleeping, as in eating and drinking, we must consult and humour our habits and feelings, which are excellent monitors, and deserving of the greatest attention. What says the poet?

“ Preach not to me your musty rules,  
Ye drones, that mould in idle cell;  
The heart is wiser than the schools,—  
The senses always reason well.”

And the nervous patient, by divesting himself of the idea of his sufferings, as far as he can, and by following the dictates of his inclination, will experience much more benefit, than by brooding over his misfortunes, and puzzling his brains by endeavouring to conform to these “musty rules.”

One particular recommendation I would propose, in concluding this subject, from the observance of which much benefit has been derived. It is—to sleep in a room as large and as airy as the patient’s convenience

\* See Captain Head’s “*Rough Notes*,” a most amusing and unpretending book.



can procure, and in a bed but little encumbered with curtains. The lungs must respire during sleep as well as at any other time; and it is of great consequence that the air should be as pure as possible. In summer, curtains ought not to be used at all: and in winter we should do much better without them. In summer it is a very great advantage to sleep in some of the villages near Town, at a sufficient distance from its smoke and impurities.

#### EXERCISE.

Next to Diet, and equally important, is Exercise. The generality of people appear to be well aware of the vast importance of Exercise; but few are acquainted with its *modus operandi*, and few avail themselves, so fully as they might, of its precious and extensive benefits. "Respiration," says Mr. Bell, "carries away the superfluous carbon of the blood, bestows heat, and stimulates the system, endows us with the power of speech, and affords us the sense of smelling, or greatly contributes to the perfection of that sense." I need scarcely mention, that we cannot respire without air, and in proportion to its purity and salubrity, will, of course, be the perfection and utility of the function. Now, our Omniscient Creator has given to our lungs the same faculty of imbibing nutriment (that is, oxygen) from various kinds of air, as He has given to the stomach the power of extracting nourishment from

different kinds of aliment ; and as the healthy function of the stomach depends upon the due performance of certain chemical and mechanical actions, so do the functions of the lungs depend upon the due performance of proper Exercise.

Man being an animal destined for an active and useful life, Providence has ordained, that sloth and inactivity shall bring with them their own curse and punishment. The industrious husbandman, whose wants are few, and consequently easily supplied ; who rises early, goes to bed early, following those inclinations which the wants and feelings of his frame supply ; and who passes nearly the whole of his life in the open air, inhaling a pure and salubrious atmosphere, and partaking moderately of the bounties of Providence, without indulging in her luxuries, enjoys health and vigour of body, with tranquillity of mind, and dies at the utmost limit allotted to mortality. In this case, the functions of the body, husbanded by temperance, and interrupted by no mental irritation, are performed in all their exquisite perfection ; for it must be observed, that this happy and untroubled state of existence is chiefly dependent upon activity of body, uncombined with activity of mind : and that its reverse—excessive mental activity, namely, accompanied with inactivity of body, is the cause of much derangement and suffering. That mysterious and close connection between the mind and the body, of which we have

already treated, is very strikingly exemplified in those disorders which are incident to literary men, who, passing their time in sedentary occupations, and exercising their minds sometimes to a degree positively painful, are martyrs to a train of nervous symptoms, which are extremely difficult of cure. Man was not created for a sedentary or slothful life ; and all his organs and attributes are calculated for an existence of activity and bustle. If, therefore, we wish for health, strength, and comfort, we must make exercise, to use Dr. Cheyne's expression, a part of our religion. But this exercise should be in the *open air*, and in such places as are free from the impurities of smoke, or noxious exhalations,—where, in fact, the air circulates freely, purely, and abundantly. I am continually told by patients that they take a great deal of exercise—that they are constantly on their feet from morning to night—but, upon inquiry, it happens, that this exercise is not in the open air, but in a crowded apartment, perhaps—as in a public office, or in a manufactory—or at a dress-maker's, where twenty or thirty young girls are crammed together from nine o'clock in the morning till nine at night !—or, what is nearly as pernicious, in a house but thinly inhabited. Exercise, this cannot be called—it is labour, and some of the worst species of labour, entailing upon its victims numerous and most distressing evils. Good air is as necessary and as important, as good and wholesome

food ; for the air, by coming into immediate contact with the blood, which is the case in the lungs, enters at once into the constitution, and by a process much more rapid than the amalgamation of our food. If, therefore, the air be bad,—that air which is to endue the blood with the capability of nourishing the body, of building up the deficiencies, and of supplying every individual organ with its peculiar and most essential quality—for this, again, is the case—if this air, I say, be not of such a nature as properly to prepare this most requisite and important fluid, every part of the body, whether near the heart or far from it, must participate in the evil which is produced.

It is on this account, and by these means, that exercise in the open air is so materially beneficial to digestion. If the blood be not properly oxygenated by the action of good air, how can the arteries of the stomach secrete good and healthy and efficient gastric juice? Then, we have a mechanical benefit besides. By exercise, the circulation of the blood is rendered more energetic and regular. Every artery, muscle, and gland, are excited into action, and the work of existence goes on with spirit. The muscles press the blood vessels, and squeeze the glands, so that none of them can be idle or torpid ; so that every organ thus influenced must be in action. What is the consequence of all this ? The functions of the body are well performed. The stomach digests

readily, the liver pours out its bile freely, the bowels act regularly, (for their machinery participates in the stimulus of exercise), and much superfluous heat and impurity are thrown out by perspiration. These are very important and essential operations; and in proportion to the perfection with which they are performed, will be the health and comfort of the individual.

There is yet another process accomplished by exercise, which more immediately concerns the nervous system. "Many people," says Mr. Abernethy, "who are extremely irritable and hypochondriacal, and are constantly obliged to take medicines to regulate their bowels while they live an inactive life, no longer suffer from nervous irritation, or require aperient medicines, when they use exercise to a degree that would be excessive in ordinary constitutions." This leads us to infer, that the superfluous energy of the nerves is exhausted by the exercise of the muscles, and that as the abstraction of blood mitigates inflammation, in like manner does the abstraction of nervous irritability restore tranquillity to the system. This, of course, applies only to a state of high and strong nervous irritation: but exercise is equally beneficial when the constitution is much weakened, by producing, throughout the whole frame, that energetic action, which has been already explained.

Having thus pointed out the extreme utility of



exercise, we have now to direct the mode in which it is to be used. It is sufficiently evident that a debilitated frame ought never to take so much exercise as to cause excessive fatigue: this would not be exercise, but labour; and, as it very frequently happens, that a weak and irritable patient will not at first be able to walk more than half a mile, without almost fainting from fatigue, such patient ought to begin by walking a short distance, gradually increasing it as the powers of his constitution become renovated. Many nervous invalids feel the greatest objection to exercise: they would rather sit and brood over their sufferings, than walk out to alleviate them. But when once they begin to take exercise, and experience the comfort and improvement which it produces, it then becomes as desirable and as welcome as it had been previously disagreeable and irksome. A great obstacle to the strict obedience of dietetic rules, and of those which ought to regulate the habits of the patients, is their interference with their ordinary avocations: but, surely the sufferer might forego, for a short time, the fascinations of fashion, the worry of visiting, and the bustle and fatigue of being visited, in order to obtain the means of future enjoyment, by the recovery of health and strength. It requires only a little resolution and perseverance at first, and the benefits which are continually accruing, will render the new plan suf-

ficiently grateful to induce the patient to pursue it with diligence.

From the plan of diet which I have sketched out, it will be seen that there is abundance of time for exercise between the meals; and I know of no better prescription for its use than that given by Mr. Abernethy, which is—to rise early, and use active exercise in the open air, till a slight degree of fatigue is felt; then to rest one hour, and breakfast. After this rest three hours, “in order that the energies of the constitution should be concentrated in the work of digestion;” then take active exercise again for two hours, rest one, and then dine. After dinner, rest for three hours, as already recommended, should be indulged in, and in summer an evening walk may be had afterwards, which, with the necessary degree of rest before supper, will constitute the plan of exercise for the day. In wet or inclement weather, the exercise may be taken in the house, the windows being thrown open, “by walking actively backwards and forwards as sailors do on ship-board.”

As a substitute for walking, which is the best mode of taking exercise, riding on horseback may be used. Corpulent females, to whom walking is exceedingly laborious, and who cannot well ride on a side-saddle, will find the old-fashioned pillion comfortable, and infinitely preferable to riding in a carriage. In the country, such an antiquated style of

horsemanship may be indulged in without observation, certainly without ridicule—in London, perhaps, it would not be so agreeable.

Change of air has occasionally produced the most wonderful effects. There can be no doubt of its great utility to an individual who has been living and labouring in a populous town; for even a person in health will gain flesh, and feel stronger, from a visit to the country of only a few weeks. Hence I should recommend every person, whether ill or well, who lives in London, or in any of the large manufacturing towns, to run away from his cares and his business, for two or three weeks, in order to invigorate his frame for the winter campaign of toil and pleasure. His mind will obtain a respite as well as his body; and both will accordingly benefit by the change. A very remarkable proof of the salutary effect of change of air occurred to a friend of mine a few weeks ago. He was a medical man of very extensive practice, and the continual fatigue of both body and mind had produced a degree of nervous derangement, as well as of local mischief, which was somewhat alarming. His strength was considerably impaired, his nights were restless, his appetite bad, and his bowels irregular. In addition to these evils, there was great tenderness, with some tension and tumefaction over the whole abdomen; so that he could not button his coat, or bear scarcely any pressure. One friend advised him to be bled,

another to be leeches, another to be blistered, and so on : but he did neither. He went out of town to the sea side, and in less than a fortnight lost all his unpleasant symptoms, and very nearly recovered his accustomed strength and energy.

#### MEDICINE.

IN the treatment of Nervous Disorders, as little medicine as possible should be used. But we cannot do without some ; and the principal objects to be attained by its administration are—the proper action of the bowels ; the strengthening of the stomach ; and, occasionally, the allaying of irritation by means of sedatives.

First, then, as to the action of the bowels.

Taking it for granted that the bowels, as is usually the case, are inactive or irregular, one object will be to re-establish their regularity, and to induce them to perform their functions with proper activity. Now this must be done by persuasive, and not by compulsory means. It ought to be the object of the practitioner to assist, or gently impel Nature, and not to force her with violence, and this may be effected with very little medicine, combined with the requisite attention to diet and exercise. In moving the bowels we must endeavour to produce a full, free, and adequate evacuation. By an adequate evacuation, I mean one that shall be proportionate to the quantity of food taken during the preceding four-and-twenty

hours. People labour under a great error, if they consider their bowels in healthy and regular action, when they are merely moved once a-day. This is an opinion almost invariably entertained by females, who rest perfectly satisfied with the diurnal occurrence of the alvine discharge. But there are two very material points to be considered in this matter—first, the quantity, and, second, the quality of the discharge.

It stands to reason, that the quantity should be in proportion to the food taken; for if a person feeds heartily and largely, his evacuations ought to be more copious than those of a person who eats sparingly and delicately. I am told every day,—almost every hour,—that my patients' bowels are regular, that is, that they are moved regularly every day. But the question is, are they *emptied* every day? Are all the *fæculæ* and filth, the *caput mortuum* of the last day's feeding carried off by their natural channel, the bowels? If not, the action of the alimentary canal is imperfect and insufficient, and ought to be remedied.

The comfort of those even in health depends so much upon this proper action of the bowels, that invalids ought not to consider our insisting so strictly upon it either tiresome or unnecessary. How, after what has been said about Sympathy, can digestion be properly performed, when the bowels contain a load of filth, which is probably disengaging some



acid noxious gas, distending and irritating the sensitive surface of the alimentary tube? It is, and always must be, a *sine quâ non* with the practitioner, to get the bowels well and properly emptied before he can hope to produce any salutary influence on the constitution of his patient.

With persons whose bowels are habitually constipated, their proper regulation is no easy task. Attention to diet and exercise will do much, and medicine, carefully administered, will perhaps do more. But a great deal will depend upon the patients themselves. It is a good plan to endeavour to excite nature by attempting, at a certain hour every day, to produce action in the bowels. I have known several instances where a regular action has been established by this and other means; and it is certainly worthy of attention. It is extremely improper, at any time, to baulk the desire of evacuating the bowels. I have known infinite mischief produced by this habit. Individuals, from motives of delicacy, and, occasionally, perhaps, through indolence, have refused to obey an inclination to relieve themselves in this respect; and this has been the consequence:—The requisite sensibility of the bowels has been impaired, their muscular action suspended or weakened, and, becoming accustomed to the stimulus which has hitherto excited them into motion, they cease to obey the call, and a vast accumulation takes place, which, stretching and distending the intestines

into pouches, serves still more to deaden their sensibility, and to oppress the whole system.

The accumulation which sometimes takes place in the bowels is positively marvellous, and almost incredible; and the evils which arise from it are very numerous. Females, whose occupations are sedentary, endure a complexity of suffering from this cause; and I will mention one case, (selected from many,) which is fully explanatory of my assertion.

L. A., a young lady, nineteen years of age, sent for me, when I found her labouring under the following symptoms. She had violent head-ache; her tongue was thickly furred; her limbs were cold and painful, and her legs were covered with large purple blotches. She occasionally felt sick, and she was so weak, as to be unable to move without great inconvenience, while her pulse beat only fifty strokes in the minute. Having attended her several times before, and being well acquainted with her habits, which were sedentary and indolent, I had prescribed some common aperient pills, which I had reason to know she had taken very regularly, and, she now told me, with the desired effect. Still, as there was evidently obstruction somewhere, I questioned her very closely as to the state of her stomach and bowels. Her answers satisfied me that there could be no extensive obstruction there; and with a view of relieving the determination of blood to the head, of which there were evident symptoms, I ordered some leeches

to her temples, and a dose of calomel and cathartic extract at bed time. The next morning I found her much the same: the head-ache and debility continued as bad as before; the limbs were equally cold and painful; but the pulse had risen nearly ten strokes in the minute. The pills had operated well; and, upon inspecting the evacuation,\* I instantly perceived the source of all the mischief. It was exceedingly dark, lumpy, and offensive, which plainly indicated its long continuance in the bowels. I now followed up my evacuating plan, and after the discharge of an immense quantity of filth, the patient was sufficiently well in a fortnight to leave town for the country, where she soon perfectly recovered: and, by paying very particular attention to her bowels, she has remained perfectly well ever since.

I should observe that a loose or purging evacuation is no proof that the bowels are emptied. In certain parts of the alimentary canal are situated semi-circular valves, which, like a half moon, are broadest at the centre. If there be much mucus "secreted" by the bowels, it serves to agglutinate the fœces, and they become adherent to these valves. If the bowels

\* The inspection of the alvine evacuation is not, perhaps, a very pleasant thing, either for the practitioner or the patient; but it should never be omitted in those cases which are at all doubtful, or which depend upon an affection of the stomach and bowels. It is a much better and clearer guide than feeling the pulse, looking at the tongue, or any other mode usually practised for ascertaining the cause and condition of disease.

be excited by certain purgative medicines, their inner membrane or lining will give out a vast quantity of mucus and, perhaps, of other fluid ; and this washes over the indurated filth in the valves, and is discharged with, occasionally, some of the solid matter partially dissolved in it. This will explain why diarrhœa, or looseness of the bowels, occurs from a constipated state of those parts. The indurated matter, sticking to different parts of the canal, stimulates its inner surface to secrete mucus, just as dust in the eye stimulates that organ to secrete tears, and irritation thus produced excites them into action, so that a purging is caused. We shall presently see what is the best plan to adopt to produce a free and adequate action of the bowels. I have previously, however, to explain the other requisite point to be considered on this subject, namely, the *quality* of the alvine evacuations.

This quality is regulated by the colour and consistence of the discharge ; both of which, but particularly the first, are dependent upon a healthy secretion of bile.

It is not compatible with my plan, neither would it answer any useful purpose, to descant largely upon the uses, composition, and formation of this important fluid : suffice it to say, that, as every one knows, it is produced by the liver ; that, according to some physiologists, it renders the digested food, or *chyle*, fit for the absorption into the mass of blood ; while,

according to others, it has nothing to do with it: it serves, at all events, as a necessary stimulus to the bowels, keeping up their energy and proper action; it likewise, from its saponaceous qualities, diminishes the roughness of the fœces; and, by smoothing their surface, promotes their evacuation. A fluid so important ought to be well prepared, and furnished in proper quantity: and as there is no other fluideither in the stomach or bowels, excepting in some particular diseases, which can impart any colour to the fœces, we are generally enabled, by inspection, to ascertain the state of the biliary secretion. If it be deficient, the stools are more or less colourless; and in children, whose diet is chiefly milk, they will be nearly white: the same deficiency also occurs in some cases of Diarrhœa. It has been said, that the decomposition of aliment in a disordered stomach, as well as its passage through the bowels, the secretions of which are irritated, will impart to fœces an unhealthy colour. This may be the cause to a certain extent; but the bile is the grand agent in producing this characteristic.

The colour of healthy bile is of a deep brown—so deep that a single drop will dye a large quantity of water of a bright yellow. If, therefore, it is in every respect, properly secreted, the fœces will have this deep brown appearance, and will communicate to water the same yellow colour as the bile itself. Every variation from this test will indicate a corres-



ponding variation in the action of the liver. If the evacuations be paler, there is a deficiency of bile,—if darker, there is no deficiency, and, perhaps, no redundancy, but a bad and an unhealthy supply; and according to the degree of colour will be the degree of imperfection.

The bile seems to have a great influence on the discharges of the bowels; for it regulates their consistency as well as their colour. The consistency of a healthy evacuation should be, neither too hard nor too soft, but smooth and homogeneous. Gelatinous, mucous, and ragged excretions, occasionally tinged with blood, denote the existence of irritation, while those of a pasty consistence are indicative of inactivity or torpidity of the bowels. A good deal of information might, probably, be gathered from attending to the relative degrees of the weight of the fœces; but as I have never attempted this mode of investigation, I am not calculated to speak decidedly on this subject.

Having explained the mode in which the bowels may become deranged, I have now to point out the best medical means of rectifying such derangement. Conforming strictly to the rule, that we ought gently to assist the operations of Nature, and not violently to force them, my object in administering purgative medicines, is to use those which are mild in their effect, and which will completely empty the bowels, without inordinately and unnecessarily stimulating them. Science and art have provided us with many

drugs and preparations calculated, with management, to effect this purpose; and although we can never depend upon the same operation in all cases, nor even at different periods of the same case, still, by varying and combining the different medicines, and by increasing or diminishing the dose, according to circumstances, we may generally obtain the end desired.

The best time for taking aperient medicine is early in the morning, before any thing else has been put into the stomach; and I have found a mixture composed of Infusion of Senna, Tartrate of Potass, Manna, and Mint water, agree with most constitutions. The following is the Formula :

|                    |     |                    |
|--------------------|-----|--------------------|
| Infusion of Senna  | -   | four ounces.       |
| Tincture of Senna  | -   | one ounce.         |
| Tartrate of Potass | -   | half an ounce.     |
| Manna              | - - | one ounce.         |
| Mint water         | - - | three ounces. Mix. |

Of this, one, two, three, or four table-spoons' full may be taken every morning an hour or two *before* breakfast. I will not stipulate for the dose, as that must depend upon its effect; and should a good and plentiful evacuation not be obtained in three or four hours by one dose, another must be taken, and so on till a proper discharge is produced.

Another very good purgative is a combination of Tincture of Rhubarb, and Tincture of Senna, with a slight addition of some mild neutral salt,—for instance :

|                                |   |   |                |
|--------------------------------|---|---|----------------|
| Tincture of Rhubarb            | - | - | half an ounce. |
| Tincture of Senna              | - | - | half an ounce. |
| Tartrate of Potass, or of Soda | - |   | two drams.     |
| Water                          | - | - | half an ounce. |

Mix.

To be taken early in the morning.

Such medicines as these are not so drastic or so irritating as the resinous gums and extracts—the common ingredients of pills; but I do not see any objection to an occasional dose of Scammony and Aloes, if there be much torpidity of the bowels. This should be taken at bed-time, in the form of a pill, and followed in the morning by a dose of some aperient mixture. A better stimulant, however, is the old Rufus' Pill (*Pilula Alöes cum Myrrhâ*) composed of Aloes, Myrrh, and Saffron; or the Compound Aloetic Pill, consisting of Aloes and Extract of Gentian.

If the bowels be very irritable, and the evacuations loose, lumpy, and gelatinous, with urgent inclination to void them, oleaginous purgatives are the most proper—as Castor oil, with Mucilage of Gum Arabic, to which may be added a small quantity of laudanum. Thus,

|            |   |   |   |            |
|------------|---|---|---|------------|
| Castor Oil | - | - | - | one ounce. |
|------------|---|---|---|------------|

|                        |   |  |  |              |
|------------------------|---|--|--|--------------|
| Mucilage of Gum Arabic | - |  |  | four ounces. |
|------------------------|---|--|--|--------------|

|       |   |   |   |            |
|-------|---|---|---|------------|
| Syrup | - | - | - | one ounce. |
|-------|---|---|---|------------|

|          |   |   |   |               |      |
|----------|---|---|---|---------------|------|
| Laudanum | - | - | - | twenty drops. | Mix. |
|----------|---|---|---|---------------|------|

A fourth part to be taken every six or eight hours.

If the biliary secretion be defective, it must be regulated by small doses of Mercury : and four or five grains of the Blue Pill (*Pilula Hydrargyri*) is the form in which this metal is usually administered. With children, however, or with those whose stomachs contain acid, the mercury and chalk (*Hydrargyrum cum Cretâ*) is a much more eligible compound, as the chalk neutralizes the acid, and prevents the formation of a highly deleterious substance—the acetate of Mercury. There is another preparation of Mercury, which, where the stomach is much debilitated, is more efficacious, and that is, Plummer's Pill, or, as it is now called, the Compound Calomel Pill. But, in ordinary cases, the Blue Pill\* is the best, because it is the most certain, remedy ; and its operation must be watched, and its use regulated, by the appearance of the alvine discharges. With regard to these Mercurial medicines, when administered with the intent above mentioned, an occasional dose is usually sufficient. A better plan is, to take half the common dose every second night for about a fortnight ; as, in this

\* It is not always easy to get this medicine so good as it ought to be. Its preparation is so laborious, that few druggists will take the pains to have it done properly : besides, if the Conserve of Roses, with which the Mercury is “killed,” contain any acid, the compound is almost poisonous. At Apothecaries' Hall, and at Allen's, in Plough Court, Lombard-street, it may generally be procured genuine and well manufactured.

period, a beneficial change will generally have been wrought. I strongly object to strong doses of Calomel in Nervous or Dyspeptic Disorders. Calomel is very valuable in the hands of a judicious practitioner: it becomes, however, very mischievous when administered indiscriminately by those who understand nothing about it. In all these cases, the mildest means are the best; and if we fail to coax the system into better health, by the due performance of its several functions, we must not dare to outrage Nature by attempting coercive measures. Again, let me repeat, that it is the practitioner's duty to "assist, or gently impel Nature, and not to force her with violence."

We now come to the consideration of the other medicinal remedies, which are used in Nervous Disorders. The old physicians and practitioners had a formidable catalogue of anti-nervine and anti-spasmodic medicines. They had Musk, and Assafoetida, Valerian, Castor, Sagapenum, and Galbanum—selected, probably, on account of their strong and peculiar odour. To these were added the Narcotics, with Camphor, Æther, Lavender, Rosemary, Ammonia, with its several chemical compounds, and almost every stimulant article introduced into the *Materia Medica*. They imagined, I suppose, that, as the class of disorders which they had to combat was difficult to manage, they would bring into the field as numerous and as efficient a force as they could muster: and that if one medicine did no good, another might.



This was the empirical, superficial, patchwork practice of our ancestors, who, whatever might have been their qualifications on the score of goodness and simplicity, had not much to boast of on the score of wisdom in medical matters.

It would be wrong to say that all these medicines are now discarded from the prescription book of the practitioner; for, undoubtedly, stimulants and opiates are sometimes as necessary as proper diet and purgative medicines. But it is only as adjuncts that any of them are used; for not one of them can strike at the root of the evil, or do more than remove or relieve an occasional symptom. So various, capricious, and confused, are these symptoms, that it is not easy to lay down any plan for their mitigation. Indeed, this part of the treatment ought to be left entirely to the practitioner; because, none but a judicious medical attendant is capable of using that discrimination and caution which are so requisite in these cases. One course, however, may be explained to the invalid, because it is harmless and generally useful.

I have already mentioned, in speaking of diet, that about three hours after a meal, it will be necessary to take some comfortable stomachic medicine, in order to renovate the powers of the stomach, after its labour of digestion. Here we may safely prescribe the requisite dose, which may consist of any simple bitter, in combination, or not, ac-

cording to circumstances. A very good draught is—

Compound infusion of Gentian - 10 drams.

Compound tincture of Gentian - 2 drams.

Mix.

If the stomach be very delicate, the following would, perhaps, agree better;—

Compound infusion of orange peel - 12 drams.

Spirit of Salvolatile - - - - - 10 drops.

Mix.

Where there is much acidity in the stomach, the Carbonate of Potass or of Soda, is a good adjunct, in doses of eight or ten grains, with twelve drams of either of the above mentioned infusions. The dose of the Alkali may be increased or diminished according to circumstances.

Another very excellent draught is the following,—

Mint, or peppermint, water - 12 drams.

Powder of *Turkey Rhubarb* - 5 grains.

Mix.

If there be a strong objection to the Mint water, the same quantity of Camphor Julep may be substituted.

If the constitution be very languid, with great debility, a more cordial preparation will be necessary, as—

Camphor Julep - - - - - 12 drams.

Aromatic Confection - - - - - 10 grains.

Compound spirit of Æther - 1 dram.

(Hoffman's anodyne liquor). Mix.

Or, if the stomach be too irritable for cordials, the Sulphate of Quinine, beginning with a grain, and gradually increasing it to four or five, will be found very efficacious. It may be combined in an ounce and a half of Camomile Tea, or Infusion of Roses.

Two of any of these draughts may be taken in the day. The first, three or four hours after breakfast ; the second the same time after dinner. And by this arrangement, the dietetic and medicinal plan, including exercise, may be followed without any interference with each other.

It will be observed, that in these prescriptions I have omitted the majority of those medicines, which have almost exclusively obtained the title of anti-nervine. I have done so, not because I think them useless ; but, because I think we can provide more cleanly and more agreeable substitutes ; and, in nervous cases, the practitioner will find it sometimes very requisite to consult, in some degree, the palate of his patient. When, however, there is a difficulty of breathing, with, or without, a dry, irritable, “hacking” cough, the compound Galbanum pill, combined with some mild opiate, is a good medicine at night ; but as to Musk and Assafoetida, the sooner they are expunged from the *Materia Medica* the better.\*

\* It is of great consequence to all invalids, that their medicines should be properly prepared, and that the drugs and other ingredients of which they are composed, should be genuine. With the

With regard to sedatives, or to speak more plainly, opiates, a great degree of judgment and caution is necessary : and, as there is nothing so liable to abuse as the practice of taking such medicines, it is more prudent to leave their use entirely to the practitioner. When once a person acquires a taste for opium-eating, or, what is the same thing, laudanum-drinking, it soon ripens into a habit which is extremely difficult to be reformed. The temporary exhilaration and subsequent tranquillity induced by the drug, are indeed fascinating and delicious: but the mischief which is done to the constitution is not to be described; and surely it is not wise to purchase temporary and evanescent pleasure, at the expense of months' and years of the most exquisite and unmitigable suffering.

While I am on this subject, I would refer to one very alarming species of nervous affection, which I have described under *Hysteria*. I allude more particularly to those cases which occur in young females,

majority of chemists, who buy their articles, like Peter Pindar's Jew, to sell again, and who can have no interest in the operation of their medicines, this is not always the case. Of course there are many houses in London where prescriptions are, in every sense of the term, properly prepared, as Bell's, Corbyn's, Godfrey and Cook's, Fisher's in Conduit-street, and Butler's in Cheapside. There is, however, a shop at the top of Lamb's Conduit-street, near the Foundling, where the utmost attention is paid to every department of the business: I allude to Aiken and Dodd's.

in whom menstruation is not yet perfectly established, and who, from this and other causes, suffer very considerably from nervous irritation. In these cases, fits, very alarming to the friends, and distressing to the patient, frequently occur. These fits are accompanied by convulsions, which affect the whole body, leaving the patient much exhausted. From what has been said, relative to irritation of the brain, it will be evident that the immediate cause of these fits depends upon such irritation, and I have always experienced benefit from the application of leeches to the head, with the use of the warm bath, and such other remedies as the nature of the case required. In these patients, the constitution will be found greatly debilitated, and its functions exceedingly irregular: it is necessary, therefore, that the strictest attention should be paid to the diet and exercise, and to the general plan laid down in this book. The perfect renovation of the powers of the frame cannot be accomplished in a day; and as has been well observed, we cannot wonder at the tardiness of the cure, when we consider the probable duration of the disorder prior to any attempt to correct it. Unfortunately, however, for the practitioner, this consideration forms no part of the calculation of the patient's friends. He is called upon, like a wizard, to charm away a malady which has existed, probably, for some weeks, but which he must eradicate, like a conjuror, with a stroke of his



wand. There are no cases so tedious and so troublesome as Nervous Disorders; and none where any immediate or perceptible amendment is so uncommon. To the conscientious practitioner, the dissatisfaction and querulous impatience of anxious relatives and officious friends, should appear in no more important light than the whistling of the wind; although to every honourable and feeling mind, nothing is so galling as ingratitude. But, how often does it occur, that after weeks of sedulous attendance and anxious solicitude, the exertions of the medical practitioner are received thanklessly, and even his skill impugned, because the disorder has not been quickly cured! This is one of the most bitter miseries attendant upon the practice of a profession, which has for its aim the highest objects—the alleviation, namely, of suffering, the restoration of health, and even the salvation of life!

One more consideration connected with this part of my subject, is the benefits to be derived from drinking mineral waters. Of their utility I have no doubt; but this does not, I suspect, depend upon their mineral properties. In the first place, the purgative waters, as at Cheltenham, contain, in a small quantity, so little of a purgative quality, as to be scarcely perceptible, even by the most delicate test. But, then, people take them in sufficient quantities to empty their bowels, and so a positive good is effected. Again, patients who frequent these

places get up early, are out a great deal in the open air, and have their minds constantly occupied with some agreeable subject. It is in this, in fact, that the miraculous virtues of Cheltenham, Harrowgate, Buxton, Leamington, Bath, and every other "watering place" consist; and as a benefit is obtained, it is of no great consequence *how*. Therefore, are mineral waters to be recommended.

I now come to the last division of my curative plan; that, namely, which refers to the administering "to a *mind* diseased." And here I must confess, that I feel fully aware of the difficulties which are opposed to success in this respect. With the body, every organ, and every function of which organ, are familiar to us, we know in most instances how to deal; but with the mind—the ever-changeable, illimitable, ever-acting, susceptible mind, the case is widely different. "In *hisce morbos*," says Sir John Baker, "propinanda est non Galeni sed Socrates Medicina; non illa e pharmacopolarum officinis, sed-escholis sapientium haurienda." If the mental malady arises from some misfortune, the difficulties of amendment are increased; for, whatever may be devised to divert the patient's attention, he still recurs, and ever will recur, to the cause of his sorrow. Change of scene, variety of amusement, the kind and cheering exertions of anxious and affectionate friends, however successful they may be in removing the impression for the time, cannot pro-

duce more than a temporary respite; the very moment their exertions are suspended, the mind reverts to its gloomy and morbid reflections. There is much truth, as well as much beauty, in the simple ballad of "Oh! no, we never mention her," particularly in the lines—

"From sport to sport they hurry me, to banish my regret,  
And when they win a smile from me, they think that I forget.  
They bid me seek in change of scene the charms that others see,  
But were I in a foreign land, they'd find no change in me."

This is precisely the sentiment that every melancholy person expresses; as he "woos his sorrows to his aching breast."

In most instances, patients thus circumstanced, are individuals of sensitive minds and warm feelings; and, therefore, susceptible of favourable impressions from the beauties of external nature. If so, change of scene may be serviceable, particularly if it be produced by travelling through a new and beautiful country. Some parts of the Continent, perhaps, would afford greater excitement, from the more interesting novelty of the scene; but to those, with whose pursuits such an excursion would be incompatible, a visit to the North of England, to Scotland, or to Wales, might be attended with very beneficial results. To the lover of Nature, in her more grand and picturesque forms, an excursion into North Wales would be attended with ample gratification;

and with comparatively less time, labour, and fatigue, than even one to the North of England.\*

In addition to this, we should endeavour to dispel groundless fears, and introduce hope; to disperse gloom and melancholy, and introduce joy; to divert, in fact, the patient's attention from himself, and produce a counter attention to some pleasing, and, if possible, engrossing object. This is, in truth, the principle which should guide our treatment; and in order to effect it, we must sedulously endeavour to prevent the recurrence of those circumstances which,

\* No one, I think, can censure me for recommending a visit to my own native country, North Wales. Several very delightful excursions might be made through the most interesting parts of that beautiful country during three or four months of the summer. For instance, a party might proceed to Dolgelley, and there establish themselves at the Golden Lion, which is an excellent inn, till they had seen all the lions in the neighbourhood. These are—the mountain Cader Idris, to the very summit of which they might ride on horseback, the guide providing horses; the Water Falls, three in number, and most beautifully situated; the lake of Tal-y-llyn; and, in the aggregate, the very fine scenery which every where surrounds Dolgelley. Having satiated themselves here, they might proceed to Barmouth, and go thence to Harlech and Caernarvon. From Caernarvon they might ascend Snowdon, and visit the Bridge over the Menai; and having done so, return to Dolgelley by way of Festiniog. From Dolgelley they might go to Bala, and thence, through the magnificent Valley of Llangollen, either to Shrewsbury or Chester: having, by these means, traversed the most beautiful and interesting parts of North Wales.

by their association with the original cause of the uneasiness, may tend to revive the recollection of it. It is needless to enter into any lengthened discussion on this most interesting psychological subject : it would occupy far too great a portion of my space ; and the treatment of a "mind diseased," depends altogether so much upon circumstances, that we must rest satisfied in giving, as we have done, a general outline of the plan of treatment, leaving the details to be filled up by the practitioner and the friends of the patient.

I have now endeavoured to point out what I conceived to be the best mode of treating Nervous Disorders generally. There are affections which I have not noticed, but which the practitioner will attend to, and which it is not needful for me to mention. The treatment, then, resolves itself into this :—proper attention to diet and exercise, the judicious use of medicine, and the regulation of the mind, according to our means and to the circumstances of the case. But no skill or effort on the part of the practitioner can prove effective, unless it be accompanied by the co-operation and willing perseverance of the patient. As the disorder is extensive in its hold on the system, its eradication must be the work of time ; and much patience is necessary on the part both of patient and practitioner. Still, when perseverance is likely to be crowned with success—when a host of evils is to be vanquished by the persever-



ance and privations of a few weeks—who, that has suffered, as a nervous invalid suffers, would not cheerfully conform to rule, even for a longer period than is usually necessary? Without this conformity, no extensive benefit can be expected—with it, in most instances, perfect health may be restored, and, as a consequence, happiness and comfort permanently re-established.

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Of joyous expectation,  
Ornated to bless the little one,  
The fleshling of creation."

W.

OBSERVATIONS  
ON THE  
CHOLERA MORBUS  
OF  
INDIA.





OBSERVATIONS  
ON  
THE CHOLERA MORBUS  
OF  
INDIA:

A LETTER

ADDRESSED TO  
THE HONOURABLE THE COURT OF DIRECTORS  
OF THE

**East-India Company.**

---

BY WHITELAW AINSLIE, M.D. M.R.A.S.

*Late of the Medical Staff of Southern India.*

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Nec poterat quisquam reperiri quem neque morbus,  
Nec mors nec luctus tentaret tempore tali.      LUCRETIUS, LIB. VI.

Non est in medico semper relevetur ut æger;  
Interdùm doctâ plus valet arte malum.      OVID.

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TO THE  
HON. THE COURT OF DIRECTORS  
OF THE  
**East-India Company.**

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HONOURABLE SIRS,

It has been said, I think wisely, by Dr. Maclean, in his valuable work regarding Epidemic and Pestilential Diseases, “ that, in the absence of those dreadful visitations, or in the slight degrees of epidemics, men may be got to reason coolly respecting their cause : but, when desolation and death begin to thicken around, and members of the medical faculty to share in the calamity, reason becomes silent, and the

phantom of contagion, like ghosts in darkness, takes undisputed possession of the unconfirmed mind.” (Vol. i. page 77.)

Such are the words of a very powerful and intelligent writer ; and such I have taken the liberty of selecting, as a short *proem* for my present respectful address. Give me leave then, gentlemen, to observe, that a residence of nearly thirty years in India, in the medical line, on the Madras Establishment, during which period I had the happiness to receive, on several occasions, the thanks of your Honourable Court for my professional exertions, emboldens me at this time to address you, in the hope that having, as President of a Committee (1) which was appointed to inquire into the nature of the Epidemic which prevailed in Southern India, in the years 1809, 1810, and 1811, had occasion to

(1) The Report rendered by this Committee was published in London in 1816, and has been reviewed, in a very flattering manner, in the Edinburgh Medical and Surgical Journal, for January 1817, and for October 1820.

witness very closely the misery springing from such devastating evils, I may be allowed, on the present occasion, to express an anxiety which I feel, in common with many of my countrymen, regarding that scourge, not less to be lamented, though very different in character, which, for some years past, has proved so great a source of affliction in our Asiatic dominions : I mean the Epidemic Cholera.

On a subject which has occupied the attention of so many able men, it may appear presumption in me, who actually never saw the disease in the form it has lately assumed, to offer an opinion ; but as, from my peculiar charges, at different times, on the Coromandel Coast, I had numerous opportunities of treating the *Sporadic Cholera Morbus*, several cases of which were accompanied with nearly every symptom which attends the malady that now rages in India ; and, as it appears from most respectable authority, that the two affections are



only different degrees of the same disorder, the Cholera Morbus being the lesser,(2) and the Epidemic Cholera the greater; I trust I may be forgiven if I should request your attention for a short time, and I need scarcely add, how gratified I should be were my humble endeavours to prove instrumental in our advancing, even one single step, towards elucidating what seems hitherto to have perplexed many, and in its peculiar character to be at variance with several long-established opinions.

I happened to be abroad, when the first unwelcome accounts of what was then called the *new disease* reached England; and on my return, having understood from every quarter that it was an affection totally different from any thing that I had ever seen in India, I gave it but little attention. The disorder, however, still continuing, though after certain intervals and with varying degrees of severity, I was lately induced

(2) See Mr. Orton's Essay on the Epidemic Cholera, vol. i. page 33.

to make more minute inquiry respecting it, and had kindly sent to me most of the publications on the subject which have been given to the world.

Without detaining your Honourable Court with a particular scientific detail, I shall simply state that, by all I have read, I have no doubt but that Mr. Orton is perfectly correct in supposing that Cholera Morbus and the Epidemic Cholera, are *bond fide* the same disease; but I must add, there is at the same time this difference, that the latter has not only every common symptom aggravated, but others of a more serious nature superinduced. Now, it may be asked, why should the disease, having become epidemic, be thereby rendered worse? We can only say, in reply, that so it is with every other malady undergoing the same change; with dysentery, with fever, with catarrh, when it passes into influenza, which it has repeatedly done in the Bengal Provinces, &c. &c.

The simple Sporadic Cholera Morbus, that is,

the disorder when it occurs but occasionally, and cannot be ascribed to any particular state of the air, I found in India usually to attack in the following manner. The patient feels what he calls out of sorts; he has a disrelish for food, and complains of squeamishness, a slight degree of head-ache and chilliness; if questioned about his bowels, he will, in all probability, tell you that he is bound; his tongue at this period is not foul, but his pulse is considerably quickened, and small. This state does not last long, and is succeeded by vomiting; at first merely the contents of the stomach are thrown up; on diluents being swallowed they are soon rejected, and continue to be as often as they are taken, for perhaps three or more hours together; they are, so rejected, not unfrequently of a whitish tinge, as if from something that they had met with in the stomach, and if chemically examined, will be found to be always more or less of an acescent nature. The repeated and long continued vomiting is truly distressing, the sufferer becoming

gradually more and more exhausted ; a clammy sweat appears upon his brow ; his pulse is scarcely to be felt ; he speaks and breathes with some difficulty, and now requires to be supported in bed, while he vomits : at length, from the painful and frequent exertion in retching, bile, by regurgitation, finds its way into the stomach, and appears to give the first check to the disease, by, allow me to say, somehow correcting, to a certain extent, the immediate cause of the sickness, which I believe to be an acid, and one so tenacious, that simple dilution has nine times in ten no effect whatever in dislodging it. The bile that has been poured into the stomach is vomited up ; the portion which goes downwards, and that is often much, acts as a natural purge, which bile always does when not intimately blended with the chyme, and relieves the patient greatly : still, however, even in cases that are by no means reckoned severe, the vomiting and purging will continue at intervals

for several hours longer, but with infinitely less straining, till the whole of the offending matter is evacuated ; when he, who but a short time before seemed about to breathe his last, falls into a sound sleep, from which he wakes free from all complaint ; his pulse having become slower and fuller ; the perspiration on his forehead warm and more fluent ; in a word, when a healthy reaction has taken place over the whole frame.

Thus have I described to you, Honourable Sirs, a favourable case, of what is termed simple Sporadic Cholera Morbus, and the career it would run if no medicine was administered—nature herself being the only physician. In other instances, however, when the person attacked is constitutionally weaker or more irritable ; when the exciting cause perhaps has been stronger, or the season of the year hostile, a more alarming *grade* of the disorder ensues ; in fact, accompanied with many of the symptoms which characterize the Epidemic affection, as it now



commits its ravages in Hindostan : the previous languor is much greater, attended with a little vertigo, or feeling as if from intoxication ; vomiting sooner comes on, together with a still more distressing retching, and sometimes insatiable thirst ; a heat or burning pain is complained of in the epigastric region (3) ; a purging succeeds to the *Hyperemesis* after a much shorter period, when a great deal of turbid or sometimes greenish-coloured fluid is evacuated, on many occasions not at all mixed with bile : extreme debility now but too surely proclaims the danger ; the pulse sinks, so as rather to flutter than beat under the finger ; the countenance undergoes a strange collapse, and changes its

(3) Occasioned, I should presume, by an acrimony arising from acidity ; the acid produced in the stomach in dyspeptic cases is a very peculiar one (by dyspeptic I here mean indigestion of any kind). *Darwin* has given us much curious information regarding it ; *M. Perperes* has told us, that it bears an affinity to the acetous. *Pemberton* notices it particularly in his work on the Diseases of the Abdominal Viscera, pages 126 and 127.

expression; spasm assails the muscles of the legs, hands, thighs and abdomen, which become gradually more and more violent, should bile not be poured into the duodenum; the breathing is laborious, the eyes lose their lustre, and the vessels of the Tunica Adnata become red with blood. There is generally, at this time, great mental agony depicted in the countenance, though the miserable man cannot express it by words: a cold moisture is felt on the brow; the extremities no longer retain their animal heat, appearing shrivelled and pale; and nature, if the medical aid afforded proves insufficient, is ere long completely exhausted, and the patient expires; all the spasms generally disappearing some time before he breathes his last. Such severe sporadic cases of the Cholera Morbus, it must be confessed, were, in my time, of very rare occurrence in India, yet such I have seen and had occasion to lament.

There is no doubt but that some of the ancients not only knew, but have well described

the Cholera Morbus in its most dangerous type ; such as *Aetius Aretæus*, and especially *Celsus*, who gives us a perfect picture of it, noticing, amongst other signs, “Pulsus celer, et frequens, animi deliquium, crurum et brachiorum contractura.” I should presume, however, from his practice, that he could not have been very successful in the treatment of it, having trusted much to wine as a remedy (4). Sydenham found it prevailing as an Epidemic in England in 1669 ; he very minutely details the peculiar symptoms which distinguish it, and from his saying nothing of bile, we may reasonably conclude that, in the cases he saw, it did not form a remarkable feature ; a proof that it was the disease in its most severe form. By Mr. W. Scott’s admirable report on the Epidemic Cholera, as it appears in the districts subject to the Presidency of Fort St. George, it would seem, from a record of the Medical Board under date 1787, that the

(4) See *Celsus*, lib. iv. chap. 11.

Cholera Morbus then existed in the *Amboor* valley, attended with violent spasms and prostration of strength : there is also noticed, in the same report (page 246), a disorder which Mr. Alexander Anderson had occasion to treat at Vellore, in 1794, which leaves no doubt but that it was the Spasmodic Cholera in its most terrific shape ; many of those who were attacked not surviving more than three hours, after being first seized. Sonnerat describes it well, such as he found it on the Coromandel Coast in 1780 : it came like a pestiferous whirlwind upon a division of Bengal troops under the medical charge of Mr. Jameson, at Ganjam, in 1781 ; men previously in perfect health dropping down in dozens : from that period up to 1790, Mr. Scott observes, that the disorder was common, as an epidemic, in various parts of India. Curtis, in the account he has given us of the maladies of that country, is sufficiently distinct with respect to its mischievous effects (*Mort de Chien*) at Trincomallie in 1782 ; and Girdlestone, in his Es-

say on the Spasmodic Affections of India, though he considers the spasms in this complaint as a distinct disease, draws but too powerful a sketch (5) of the evil in question at Madras in 1782. I can not learn that the Cholera (6) has hitherto attracted much attention from foreign practitioners. *Pierre Campet* makes memorable mention of it in his *Maladies graves de la tone zorrïde* ; and *Monsieur J. J. Deville* has written a short work on it, which was published in Paris in

(5) Girdlestone does not even mention the word *Cholera*, but under the general head of spasms describes no doubt the Epidemic Cholera ; he speaks of the almost *incessant vomitings*, insatiable thirst, cold sweats, &c. “Several patients,” he says, “died in the first hour after the attack.” At a meeting of the faculty at Madras, he informs us, it was unanimously judged, that the disease proceeded from *damps from the earth* ; the *not using capsicum*, *bad arrack*, and *coffee*, made of *stramonium*.—See his Essay, page 55.

(6) My excellent and much respected friend, Dr. C. Wilkins, informs me, that he has a perfect recollection of the Cholera Morbus having been epidemic in the Bengal provinces about the year 1782 ; but it does not appear at that time to have reached farther south than Cattack.



1819 (7); he was surgeon of the *Seine*, and had an opportunity of seeing the disease in Bengal in 1818: his *brochure* contains some well detailed cases, and is loud in praise of laudanum, camphor, and ether.

But, severe and occasionally destructive as were the attacks of the Cholera Morbus which were witnessed by the medical men just mentioned, they appear altogether trifling when compared with the affliction, which has now continued for nearly eight years, in our Asiatic territories; where, having passed again from a sporadic into an epidemic disease (8), and taking a much wider range for its work of devastation, it has come upon the world like a very fiend; and, by appearing at seasons, and under circum-

(7) It is entitled "*Mémoire et Observations sur l'Epidémie de Cholera Morbus*," and was read at the Royal Institute of France on the 21st June 1819.

(8) Which it appears first to have done at *Zilla Jessore* in 1817; this is a place lying 100 miles N.E. of Calcutta. See Dr. J. Johnstone's work on the Influence of Hot Climates, page 245.

stances so opposite, has defied alike the practical and ingenious, either exactly to comprehend its peculiar nature, or to establish a mode of treatment, which, by its reasonable success, should afford some well-grounded belief that the cause of the malady had been clearly ascertained.

Mr. Orton, in his work already cited, has given (page 19) a very distinct description of the Epidemic Cholera, dividing it into three stages: it does not appear, however, to have differed materially from the malady in its most violent sporadic form, such as I saw it in India. Another excellent account of it I find by Mr. Charles Daw, in the report of the disorder published under the authority of the Bombay Government: so has Mr. Boyle clearly enumerated its various symptoms in his short *Treatise on the Cholera of India*. With the collected materials of these gentlemen, and several others before them, embracing the recent and more alarming appearances of this formidable enemy, Dr. James

Johnstone, and Dr. Good, with all that talent and discrimination which distinguish them, have given their sentiments fully to the public ; so that, as far as regards the *Historia Morbi*, perhaps little remains to be done ; a more certainly successful and definite method of treating it must be the fruits of yet greater experience, and close and patient investigation.

Like every other complaint to which the human frame is subject, the Epidemic Cholera differs much in its degree of severity, according to circumstances, connected with natural constitution, diet and exposure to cold, heat or moisture ; in some instances, especially in Ceylon, which island it reached in December 1818, and where it would seem to have raged even more violently (9) than in the Peninsula, the patients expired in twelve or fifteen hours from the first

(9) See Marshall's Medical Topography of Ceylon, page 199, where that gentleman observes, that though in a few cases medicine was useful, it ultimately failed in producing a cure.

attack. Mr. Conran notices the peculiarity attending many cases which came under his care, of the total absence of all spasm; and that in others, the sufferers vomited, and were purged, but two or three times (10); nay, there are on record several well authenticated accounts, from which it appears, that so powerful and uncontrollable was the Morbific cause, that vomiting, purging, and spasm, were all in a great measure if not entirely absent. Symptoms resembling those of Hydrophobia have occasionally supervened, nay, Trismus itself is said to have made its appearance; at other times, the vital energies failing, as it were at once, death closed the scene in three hours from the period that the unhappy person first began to complain!

On dissecting the bodies of those who died of this malady, somewhat different reports have been made; generally speaking, however, the blood then drawn is of a dark or purplish

(10) See Mr. Orton's Essay, vol. 1, page 39.

colour; the stomach and bowels have been found distended with gelatinous matter, and sometimes with a fluid of a dirty greyish colour; little sanguinous turgescence has appeared on the surface of the organs, but there was always an absence of the moisture and glossy character of health; the liver has been said to be much enlarged (though by other accounts it has been affirmed that both it and the large intestines had a perfectly natural appearance) (11), the gall-bladder to contain bile of no unusual consistence, and the arterial branches spread over part of the brain have been discovered to be distended with red blood, while the veins in the same situation were replete with that of a peculiar dark hue (12), and in certain instances the

(11) See Mr. Boyle's Treatise on the Cholera of India, page 50.

(12) See Mr. Annesley's well-detailed account of appearances after death, in Mr. Orton's Essay, vol. 1. page 56.

I cannot withhold from mentioning the great professional

zeal



abdomen, when opened, emitted a singular, unnatural, and most offensive odour.

The remote cause of the Epidemic Cholera has called forth much interesting discussion. There are those who consider it as consequent of contagion ; others hesitate, and perhaps wisely, about giving a decided opinion, and amongst those is one who has written the last, and with no common ability, on the disease ; I mean Mr. W. Scott of Madras : his words are, after having observed, as far as regards the Indian Peninsula, that the progress of the disease from north to south had been affected with surprising regularity :—" It might therefore be inferred, that it has been propagated by infection, yet the par-

zeal which Mr. Annesley has testified in preparing, and bringing with him from India to England, a most interesting and valuable collection of drawings, connected with Morbid Anatomy ; they are finished in a very scientific and masterly manner, and are taken from dissections of those who died of Hepatitis, Dysentry, and Cholera Morbus. It is sincerely to be hoped, that the public may soon benefit by that gentleman's most laudable exertions.

ticular evidence that it has been so, from one individual to another or from place to place, is attended with many difficulties." Might I venture to give an opinion, I should say, that as far as I could judge from the *data* before me, it is not contagious. I at one time supposed that it might owe its origin to a peculiar distemperment in the atmosphere, a certain subtle something, not in chemical solution with the component parts of the air, for then there might be a chance of detecting it, but rather suspended in it, and conveyed by it, like a mote in the sun's beam, in a way that we are altogether unacquainted with; but this notion I have lately been induced to relinquish, for reasons which will be explained in another part of this letter.

The changes which daily, and I may add hourly, take place in the atmosphere are great, often rapid, as far as regards weight, temperature of the air, electricity, &c., and we know, that the animal frame, like a fine machine, is to a certain degree susceptible of those changes;

some of us, owing to a particular idiosyncrasy, are of course more liable than others to be affected by them. I have seen those, and one of them was blind, who never failed to complain of a strange irritability in their nervous system on the approach of rain, while people of a different description have their digestion deranged by a thunder-storm. In endeavouring to find a probable remote cause for the epidemic fever which prevailed in Southern India in the years 1809, 1810, and 1811, I stated in the Report (13), that deviations (14) from the usual order of climate, appeared to me to have had a powerful effect. Celsus (15) has said that those seasons are ever the most salutary which are most uni-

(13) See Medical, Geographical and Agricultural Report, page 108.

(14) Other more specific causes of fever in the Southern Provinces at that time were of an Endemic nature, such as the air of certain ill-ventilated, thick woods and jungles, in narrow valleys, amongst lofty mountains, and that of marshy situations.

(15) See Celsus, lib. ii. cap. 1.

form, cold or hot: from similar sentiments, Hoffman (16) would seem to have deduced his general remote cause of epidemic fever; and it may not be irrelevant here to observe, that the natives of India themselves also ascribe epidemic disorders to like irregularities in the weather, as we learn from the *Ganetamnotum*, an astronomical *Sastrum* to be found in the Sheva Pagoda at Tencoushie, in Tennivelly. Nay, I perceive that the subject has even called the attention of the Persian Medical writers, as may be found by referring to a curious work entitled *خف علي* *Khuffi Alāi*, which treats on the art of preserving health, and contains essays on the air, seasons, &c.; it is written by *Ismael Ben Hussein Ben Mohamed Iovany*, Physician to Khuarizin Shaw.

Dr. Charles Maclean, in his work on epidemic diseases, informs us that he believes them to depend on the *undue action* of the atmos-

(16) Vide Med. Rat. Syst. Hoffman, par. i. cap. 1.

phere (17) ; comprehending all the intermediate degrees of affection, between the slightest catarrh, and the most destructive pestilence. The deviations from the natural order of climate above-mentioned—for instance, rains falling in great abundance at periods when the weather should be dry ; scorching winds continuing to blow when the monsoon ought to have made its appearance—those *deviations*, I repeat, and such *undue action* in the atmosphere as Dr. Maclean alludes to, are, however, of too general a character to apply to every case, for as there are different kinds of epidemics, so must there assuredly be a specific difference in the nature of the morbid influence producing each disease: hence, that which brings on influenza cannot be the same as that which gives rise to intermittent fever ; nor can the poison, if I may so call it, in the air, which engenders the plague, be homogeneous to that which gives birth to

(17) See his work, vol. i. page 148. See also Dr. Adams's very able *Inquiry into the Laws of Epidemics*, page 18.



small pox or measles. The ancients bestowed much attention on the state of the atmosphere, as a cause of sickness. The very father of physic himself, Hippocrates, wrote on the subject, and Dr. S. Farr, in his very able preliminary discourse to his translation of that great man's *History of Epidemics*, has extended his views with all the skill and acumen of a more advanced age ; yet must we allow that little positive knowledge appears to have been obtained with respect to the peculiar characterizing and chemical nature of *miasmata*, and we may safely say, that when Sydenham (18) ascribed endemic derangements to a secret constitution of the air, he gave us as satisfactory an account of the matter as any modern author has yet done.

The malady which we have now so much reason to deplore has prevailed, as Sir Gilbert Blane has remarked on Mr. Corbyn's letter, "to a degree equally violent at all seasons of the year : in regard to temperature, from 40°

(18) See Swan's Sydenham, pages 7 and 8.

to 50° of Fahrenheit, to 90° or 100° ; in regard to moisture, during the continuance of almost incessant rain for months, to that dry state of the atmosphere which scarcely leaves a vestige of vegetation on the surface of the earth." It has spared, I should add, neither age nor sex nor condition ; it appears sometimes to travel with the wind, which distinguishes the season, and sometimes right against it, and what is most singular, it seems to be so capricious in its nature, if the phrase may be used, that it makes selections of particular tracts and villages, leaving others, though in the vicinity, altogether undisturbed. It has swept over thousands of miles, through countries and climes extremely dissimilar ; it has raged on level and unwooded plains, as well as amidst deep woods and ill-ventilated valleys ; by the sea-side equally as in places remote from the ocean. It has disappeared for a time, and millions rejoiced ; but, alas, it has come again, like an unglutted monster, to terrify and destroy. It attacks with most fury, when

least expected ; so differing from the plague and yellow fever, which we know have their peculiar periods of visitation ; for instance, the plague in Egypt and Syria from the month of April to July—the yellow fever in America from July to November (19).

Amongst the many ingenious men of our country who have turned their attention to the history of the atmosphere, some of the most distinguished are Dr. Franklin, Priestly, Dr. H. Robertson in his *General View* of it, Mr. Ellis in his *Inquiry* into its changes, Pitta in his *Treatise on the Influence of Climate on the Human Species*, and, perhaps above all, Dr. A. Wilson in his observations on the Influence of Climate, Dr. Jackson on the Epidemic Fever of the South Coast of Spain, Dr. J. Johnson on the same subject applied to tropical regions, and Mr. Forster in his very interesting work on the *Casual and*

(19) On the subject of epidemic and contagious diseases, the reader will find some sound and admirable opinions in the Westminster Review for January 1825, page 134.

*Periodical Influence of Atmospheric Causes on Human Health and Disease.* The Physicians of the Continent, who have applied their ardent minds to the investigation of those Phenomena, are still more numerous, but I shall not detain your Honourable Court by particularizing them (20); such researches must ever be considered as praiseworthy, and in our state of I may say twilight, if not darkness, regarding the absolute causes of those affections which so often hurl destruction upon the human race, cannot be too much applauded.

In the Medical Report, already mentioned, and which was published in London in 1816, I took occasion to observe, that by the experiments of Abbé Nollet (21) it appeared that the electric

(20) The reader will find a list of their names and writings at the end of Mr. Forster's work.

(21) Abbé Nollet was a celebrated French philosopher: he was born in the diocese of Noyon in 1700, and was contemporary with Duhamil and Jussien; few men have contributed more to the  
advancement

fluid had the power of accelerating the growth of vegetables (22); it therefore became a question, whether a diminished quantity, or irregular distribution of it, might not prove injurious to the health of man; and Mr. Forster, in his work above spoken of, informs us (page 41), that during what has been called unhealthy weather by medical men, he has remarked circumstances which appeared to denote an irregular distribution of atmospheric electricity, as evinced by the Electroscope (23), showing at the sickly period a perpetual changing and unevenness in

advancement of science in various branches; his treatises on electricity are published in five volumes, and are replete with much curious matter.

(22) For much most valuable information regarding the functions and physiology of plants, the reader is referred to Mr. A. T. Thompson's excellent Lectures on Botany. To that gentleman is evidently due the merit of having discovered the respiratory organs of plants.—See work, vol. i. page 617.

(23) Which is formed by constructing the electric column into what is called by De Luc, an aerial electroscope for observing the electrical changes which take place in the atmosphere.



the action of the electricity of the air on the instrument. In this manner Mr. Forster has, by his experiments, attempted to trace the connexion betwixt certain peculiarities in the manifestation of electricity, and the unhealthiness of the season; and the investigation is curious: but Mr. Orton has gone yet farther; for still looking towards the atmosphere, he thinks that he has discovered, in a diminished quantity of the electric fluid, the actual cause of the Epidemic Cholera. His concluding words on this point are:—  
“and if it has been proved that a rarefaction of the air accompanies the prevalence of Cholera, it follows that the disease is accompanied by a diminution of the free electric fluid in the atmosphere; and it is this deficiency, produced in this way and other ways, which I consider as the great cause of the Epidemic.”(24) Having then, as he supposes, thus detected and disclosed the more distant source of the calamity, he proceeds

(24) See Mr. Orton's Essay on the Epidemic Cholera.

to draw from it his *proximate cause*, which he conceives to be “*a diminished energy in the brain and nervous system,*” consequent of the reduced quantity of the electric fluid lowering the powers of life in all the different organs.

Mr. Scot combats this theory of Mr. Orton, and it must be allowed with great ingenuity ; “if,” says he, “the principle of life depended upon so mobile, so variable, and destructive a power, would not every living thing be in perpetual danger ? And were this subtile fluid so very essential to the living principle of man, should we not see a different distribution of it ? Now, in warm regions of the earth, where life abounds, this element is certainly not more plentiful than in more temperate regions, and far from deficient in those frigid territories where no living thing exists.”

Mr. Assistant-Surgeon Chapman hazards a question, whether *carbonic acid gas* might not be the remote cause of the cholera, from the malady so often making its appearance near

stagnant pools (see Mr. Scot's Report, page 182); but this supposition must fall to the ground when we reflect how often it shows itself on arid plains at a great distance from marshes; the notion that it may owe its origin to effluvia from particular soils is equally untenable.

Mr. Scot appears to hold cheap the idea of the decayed or *oose* rice having had any share in first bringing on the disorder (a notion which we believe was entertained by Dr. Tytler); and seems rather inclined, though he says nothing positive, to look to oxygen as a probable source from which might be drawn some more satisfactory conclusions: oxygen is no doubt most essential for the maintenance of animal life; and as he justly observes, of all the products of nature there is none so invariable in its presence and its proportionable quantity: now, I should imagine, that it is this very undeviating proportion that it preserves as a component part of the atmospheric air, which ought to prevent it ever being considered, in itself, as a spring of contagious or

epidemic disorder ; for, examine the air where you please, on the hills of Malvern, or at the sick bed of a person dying of typhus fever, the proportion of oxygen will be found uniformly the same.

With all due deference to the acknowledged talents of the medical gentlemen whose sentiment I have just stated, with submission to their *local* experience, and certainly with great respect for the scientific research of Mr. Forster, I shall take the liberty of suggesting, that, considering the discoveries lately made by Mr. Gallois, à French Physiologist, and those still more extraordinary of Dr. Wilson Philip on the subject of galvanism, I should conclude, that we might with greater confidence look to that particular modification of electricity, and its variations, for explaining more definitely the remote cause of the epidemic Cholera. Allowing then the truth of Mr. Orton's position, that the proximate cause of the disease is a diminished energy of the brain and nervous system, the question is,

how is this brought about? He says, by a diminution of the free electric fluid in the atmosphere: but, leaving that element strictly called electricity for other (25) mighty purposes, for which it appears to have been particularly designed by the hand of the Creator, namely, producing those phenomena which are continually going on in the great alembic of the atmosphere, connected with thunder, water-spouts, the growth

(25) I do not say this unconscious of all the wonders that are said to have been worked by electricity, as detailed by *Abbé Bertholon*, *Carpue*, *Singer*, *Morgan*, &c., especially by the first, who, in his work "*De l'Electricité du Corps humaine dans l'état de Santé et de Maladie*," maintains, that the electricity of the atmosphere has a decided influence on generation, conception, and parturition (p. 435). Later observations, however, appear not altogether to lead to the same results, at least not to the same extent. *Van Marum* found that it had no effect in quickening the pulse; he also observed, that so far from increasing insensible perspiration, electricity had the opposite effect; and, of late years, it seems merely to be considered as a useful stimulus or exciting agent in cases of rigidity of the muscles, indolent tumours, chronic rheumatism, and in certain paralytic affections.



of plants, and the *Aurora Borealis*, as has been beautifully illustrated by *Hawkesbee*; and putting oxygen, however necessary to support life, out of the question, at least as a *cause*, from the fixedness with which it ever preserves its due proportion in the atmospheric air,—let us suppose that it is a somehow altered, diminished, or perverted distribution of the galvanic fluid which particularly exerts its influence (26) on this

(26) It has been ascertained by the experiments of *Pelletan*, as will shortly be more fully noticed, that the human frame is found to possess the galvanic fluid as a component principle. May we not, therefore, suppose, in cases of Cholera, that, owing to a certain state of the atmosphere, the galvanic influence in the air is for a time altered, let us say, becomes less abundant; and that such a state, though it is attended with no bad consequences on the many who are altogether well, may have a very different effect on those who are, from whatever cause, predisposed to suffer from this changed condition: for instance, through fear, grief, indigestion, whether ventricular, extraventricular, or otherwise; and are thereby rendered less able to bear up against the diminished excitement? Nay, may not the predisposition itself be accompanied with a diminished portion of the galvanic principle in the frame of the

occasion, which further produces the sinking of the powers of animal life ; in a word, the disease in question. I would not be supposed from this to infer, that galvanism and electricity are two absolutely distinct powers ; but we may surely allow, that different modifications of the same original element may have different destinations especially assigned to them for the use of mortals ; and we know that a third wonderful agent, magnetism, so admirably suited to the purposes of navigation, has, by the curious discovery of Professor *Oersted*, been almost identified with voltaism ; so that when the piles of a voltaic apparatus are connected by a steel wire, that

individual, who, in this way, becomes doubly assailed ? How that peculiar state of the air, lessening the quantum of galvanic fluid in it, may be brought about, is a question for philosophy in its higher walks to decide. Great deviations from the natural order of the seasons in tropical countries, for several years together, are known to be ever productive of epidemic calamity, of one kind or other ; and at this point I much fear the present limited extent of our science, with regard to atmospheric phenomena, must make us pause.

wire acquires magnetic properties. But I am well aware that I am now getting on very mysterious ground, and may be told, and with truth, that we are not yet acquainted with a free galvanic principle in the air, distinct from electricity; it has never yet been brought down to us from the clouds, as that has been by Romas Cavallo and others. All this is readily granted: but it will, on the other hand, be as readily allowed that there are certain discordances very difficult to reconcile, and which puzzle us not a little; and perhaps one of the most striking of those is, that while *Nollet* found, by his experiments, that electricity appeared to have some effect in hastening the grow of plants, Baron Humboldt soon after ascertained that plants were not at all susceptible of the galvanic influence; thereby differing most essentially from animals, with regard to the living principle. To develop electricity, mechanical friction is required. Friction, on the contrary, has no effect whatever in the production of galvanism; and so far from dry-

ness being necessary, the voltaic pile is drenched in acid fluids; yet are they both, though obtained by distinct processes, made subservient to the uses of men. (27)

The admirable Dr. Wollaston was the first who decidedly adopted the notion that the chemical action of the voltaic pile was a primary origin of all the changes produced, and the cause of the electrical effects. Sir Humphry

(27) We might cite other good authorities for discordances not easily accounted for: Mr. A. T. Thompson observes, that galvanism appears to differ in some degree from electricity in its *effects*, and the mode of its *production*. Aldini says, that if it be required to give a shock to the nervous system by means of electricity, a second shock cannot be produced before the action of the first is over. It is quite different in galvanism, by which a strong and continued shock may be obtained without making any change in the apparatus. The common electrifying machine produces no effect unless the patient be insulated; on the contrary, galvanism, when applied by means of a continual current, soon exhibits remarkable effects on the humours of the body.—See his General View of the Application of Galvanism, &c. &c., pages 55 and 56.

Davy had embraced at one time the same idea ; but appears since to have abandoned it for the hypothesis of electric energies. The very ingenious Mr. Brande (28) supposes that in the voltaic pile the original source of electricity depends upon the contact of the metals. The *accumulation* must be referred, he conceives, to *induction*, which takes place in the electrical column through the very thin stratum of air or paper, and through water when that fluid is interposed between the plates. All I shall venture to adduce (in a question involving a research far too profound for my limited science) in support of my selection of a somehow altered or perverted distribution of the galvanic principle, however occasioned, as being perhaps the remote cause of the epidemic Cholera, is my having seen, as the fruits of positive experiment, that voltaism, or that particular modification of electricity, or by whatever name it may be called, possesses an

(28) See Manual of Chemistry, vol. i, page 279.



unequivocal relation to the phenomena of life !  
Nay, Dr. W. Philip, in his *Experimental Inquiry into the Laws of the Vital Functions*, has concluded, that the identity of galvanic electricity and nervous influence was established. Dr. Ure is unwilling to go quite so far, although he says that Dr. Philip's experiments show a remarkable analogy between the two powers, since the one may serve as a substitute for the other : a conclusion reasonably enough deduced from this curious fact, that the eight pair of nerves distributed to the stomach, and subservient to digestion, in several rabbits, having been divided in the neck ; after the operation, the food which they had eaten remained without alteration ; and the animals previously evincing much difficulty of breathing, seemed to die of suffocation. But other rabbits similarly treated, and kept under the influence of galvanic action for twenty-six hours, showed no difficulty whatever in breathing ; and the animals having been killed, the food (parsley) was found in *a perfectly*

*digested state !* Thus galvanism performed the office of nervous influence *in the process of digestion !* In like manner, by the assistance of the galvanic fluid, did Dr. Philip give decided relief, in no less than twenty-two cases of asthma ; drawing the following general inferences from his multiplied experiments—“ That galvanic energy is capable of effecting the formation of the secreted fluids, when applied to the blood, in the same way in which the nervous influence is applied to it ; and of occasioning an evolution of *caloric* from arterial blood.” In short, he says, “ that galvanism appears to be capable of performing all the functions of the nervous influence in the animal economy ; but obviously it cannot excite the functions of animal life, unless when acting on parts endowed with the living principle.” And I may add, that I am the more confirmed in the theory I have adopted, regarding the influence that the galvanic fluid exerts in the frame of man, since I learnt the curious fact discovered by Mr.

Pelletan, and brought forward by him at a sitting of the Royal Society at Paris, so late, I think, as the 3d of January 1825 ; which is, that he had observed in the operation of acupuncture, that the galvanic fluid was constantly disengaged from a needle, which had been plunged into the human body (29). With such facts then before us, and with the conviction we have, that in the epidemic Cholera there is a singular sinking of the vital energy, and that this lowering of the powers of life is particularly evinced by the almost constant derangement of the first passages ; with such facts, I say, in our hands, will it be presuming too much to suppose, not only that a temporary alteration or perverted distribution of the voltaic fluid

(29) Aldini informs us that the sense of smelling is the only one which has been found impracticable to excite by galvanism ; but that by it a sensation of light has been given to the blind, a degree of hearing to the deaf, and that with it he had much diminished that painful torpor with which the melancholic are often afflicted.—See work above cited, page 65.

may constitute the remote cause of the malady, but that we may look to a judicious application of it as a remedy, from which much benefit might be expected ?

It is now time, Honourable Sirs, that I should come to the more immediate purpose of this communication ; which is, to lay before you the result of my own experience in the *Sporadic Cholera Morbus* in India ; and, as that malady is now understood to be the same, but in a lower degree, with that which has lately called forth much serious investigation, to offer some opinions with regard to the mode of treatment which I should recommend to be tried in its more severe type. If what I am about to suggest, and I do it with great diffidence, does not prove successful, it at all events can be attended with no bad consequences ; and, whatever may be the issue, the attempt will at least be allowed to be not altogether unworthy.

Having often, while on the Coromandel coast, been disappointed in giving a decisive check to

Cholera Morbus, by the usual means of powerful stimuli, antispasmodics, blisters, warm embrocations, &c., I concluded that I must be wrong in theory, so looked for other means of relief. On examining, as already observed, what is usually vomited on such occasions, I invariably found it of an acescent nature ; and, on more minutely questioning those who were labouring under the disorder, I discovered that, in every instance, the ailment could be traced to some acid or acescent substance, such as limejuice of a bad quality, unripe fruit of any kind, crude vegetables, buttermilk too long kept in hot weather ; or, what often happened, the toddy of the cocoa-nut tree or palmyra-tree drank in a state of fermentation. So much having been ascertained, I lost no time in having recourse to antacids, and generally gave a preference to the sub-carbonate of magnesia, in a full dose (30),

(30) Seldom less than two drachms and a half, or three drachms ; this I found a more certain remedy than the liquor potassæ, or  
the



in a little tepid water ; and so effectual was the remedy, that I found in very few instances indeed that I had occasion to repeat it. The offending acid was by this means neutralized, the distressing vomiting ceased ; the patient had perhaps a few loose stools ; a re-action took place in the frame ; the natural warmth was in consequence restored to the extremities ; the pulse became fuller and slower, and a tranquil sleep soon supervened, to crown the whole, from which the patient never failed to awake free from complaints. Should, in other cases, all nausea be perfectly gone, but still there be a little offending bile passing downwards, I ordered as far as four grains of calomel, made into pills, with ten or twelve grains of rhubarb, and a little cinnamon, at bed-time : if, on the other hand, though the vomiting had ceased, the patient had been much exhausted, and the

the subcarbonate of potass ; or than soda or lime-water, or even than the liquor ammoniæ, which is considered as a powerful ant-acid, in doses of from fifteen to twenty drops in a little water.

bowels were completely unloaded by the purging, then I found a gentle opiate could be given with the greatest advantage; the enemy had been corrected and dislodged, so that all that remained to be done was but to sooth. And it is worthy of notice, how much the Cholera Morbus of India appears to differ from the disease as met with by Mr. Brown, of Musselburgh, who says, “I prescribed, chiefly as a *placebo*, a mixture of carbonate of magnesia and cinnamon water; and even this I never saw retained upon the stomach until the opiate had taken effect”(31). Now I always found that, till the cause of the vomiting was removed, which I had ascertained to be an acid, I might indeed lull the malady for a short time by means of an opiate, but I could do no lasting good. With this simple remedy—I mean the antacid—I hesitate not to say that I have saved many hundred lives:

(31) See a well-written account of Cholera, as it appeared in Scotland in the years 1796, 1798, and 1800, by Mr. T. Brown, page 19.

Since my return to England, I have ordered it with equal success; and, in one instance, to a lady in a most alarming situation, who, previously to taking it (the subcarbonate of magnesia), had been brought to the brink of the grave, having used various antispasmodics, and many both internal and external stimuli, in vain. And, in support of this method of treating the disease, I could now ask one of the most distinguished physicians in London, whether or not he does not find the antacid just named an absolute specific in Cholera Morbus, provided it is administered in time.

I should then, Honourable Sirs, beg leave to recommend the same medicine at the beginning of every case of epidemic Cholera, and, if necessary to be repeated, with the addition of a little powdered ginger, till such time as the exciting cause of the vomiting was removed; nay, as a still more extended measure for correcting the acescency, I would advise the giving *enemas*, prepared with magnesia, to be also repeated if

occasion required. I am now aware that it may be urged, that, whatever might have been the case with regard to the sporadic attacks which I witnessed in India, it does not appear that any acid or acescent substance is required to be taken into the stomach, to occasion vomiting in the commencement of the epidemic disease. To this I reply, true; but it will be remarked, that, though not taken into the stomach by deglutition, at all events that degree of acidity, which ever more or less attends indigestion (32), is produced by the operation of the great morbid cause, bringing on a sinking of the nervous energy, and especially manifesting its malinfluence by deranging the first passages, and chiefly the gastric juice. (33) And here is perhaps one

(32) The acid produced in such cases of dyspepsia has been ascertained by Prout to be the muriatic acid.

(33) Nay, we know, by late ingenious experiments by Mr. Prout, and which may be seen in part I. of the Philosophical Transactions for 1824, that the contents of the stomachs of various animals which had been fed in the usual way, shewed, when ana-

leading distinction betwixt common Cholera Morbus and the disease when become epidemic; that, in the first, an acid or acescent substance taken into the stomach, proves the *exciting cause*; in the other the acescency is secondary, becoming one of the symptoms, induced by the sinking of the nervous energy, which we hold with Mr Orton to be the proximate cause of the disorder. If, then, an antacid will correct one offending acid, it equally will another, though that acid may not have been generated exactly in the same way. To neutralize the acid in the stomach, however, and thereby remove the vomiting, would be only allaying one of the symp-

lyzed, that in *healthy digestion*, the *muriatic acid free*, at all events unsaturated, was a constant component part; and we also know, that Spalanzani, although he concluded that the gastric juice in its pure state was neither acid nor alkaline; yet that *chyme*, when examined chemically, was very generally found to be of an acid nature. Now may it not be, that the great exciting cause of Cholera may operate by increasing this tendency to acidity, and changing its quality from sanative to morbid?



toms of the malady ; but as that is by far the most frequent, and a very distressing one, to mitigate it any how must be a great point gained. If the vomiting is kept up by the presence of an acescent matter, which we believe it to be, no wonder that antispasmodics and stimuli should so frequently be rejected for hours and days (34) together, till such time as that acid is removed ; and we have seen that copious dilution will seldom or ever effect this. But nature herself has sometimes a surer remedy for the same end, that is bile, which, in mild attacks, when the spasms have not been so violent as to check its flow, the efforts in vomiting send upwards by regurgitation from the duodenum into the stomach ; such cases always end favourably. Further, again, it may be argued against the plan of treatment now recommended, that *magnesia* had been already tried in cases of epidemic Cholera ; and that, although it held out great

(34) See a letter from Mr. Assistant Surgeon Smith, in Mr. Scot's Report, page 34, Narrative.

promise at one time of proving an invaluable medicine, it had, like other remedies, ended by disappointing hopes. At its failure, however, given in the manner it appears to have been, *combined with milk*, I am not at all surprised, as, in this way, its vehicle contained the very principle of acescency, which the absorbent powder itself was intended to remove; and I maintain, that no stomach in a deranged state can ever, with impunity, receive into it milk, in any form, whatever it may do when the digestive power is undisturbed. If then, even with milk, this medicine was found in some cases evidently to be of service, how much more so must it have been without it? In fact, magnesia with milk, on such occasions, I conceive to be the very *bane and antidote* combined; the one most admirably counteracting any good that could have been expected from the other.

We all know that, for ages past, bile has been supposed to be the positive exciting cause of Cholera Morbus; and most of our modern wri-

ters, foreign (35) as well as British (36), still consider it to be so. Hence we hear much of the *Cholera Biliosa*; but this I cannot say that I have ever seen in the form it is usually described. That bile, during hot summers and in autumn, is secreted in greater quantity than in colder months, no one will dispute; that it will frequently bring on simple *diarrhœa*, I do believe; or, if pent up for days together from constipation, and when the patient has been at the same time exposed to inordinate (37) heat and fatigue,

(35) Of this Fontana (of Cremona) seems to make no doubt.—See his “*Maladies qui attaquent les Européens dans les Pays chauds*,” pages 110—French translation from the Italian.

(36) See Dr. Ayres’ *Practical Observations on the Disorders of the Liver*, page 90. Dr. Chisholm, on the other hand, allows bile only to be the cause of Cholera in cold climates; in hotter regions, he conceives a spasmodic state of the stomach to be the cause.—See his *Manual of the Climate and Diseases of Tropical Countries*, p. 85.

(37) Dr. Maclurg, in his work on the Bile, pages 111 and 112, supposes a redundancy of it to be best accounted for by the operation of heat, favouring the spontaneous degeneracy of all fluids,

and subsequently to the chill air of the evening, that it will give birth to *bilious fever* is what I can as readily conceive: but to produce anything like Cholera, there must be, I presume, an acid of some kind or other in the stomach, either taken into it or generated in it; the bile itself, if poured into that organ, which it can only be by regurgitation from violent retching, so far from producing the disease, often puts an entire stop to it, by correcting one of its worst symptoms. Such were ever my opinions while in India, twelve years ago; and such, I have been pleased to find, are the sentiments of Dr. James Johnston, who observes, “The fact is, that I have long ago stated that the discharge of bile, in Cholera, is a

and accelerating that septic animal process by which blood is converted into bile. Dr. Saunders, on the other hand, in his work on the Liver, pages 134 and 135, says, that it is a wise law of the animal economy, that in warm climates a large quantity of bile should be prepared, of a more than common bitter and active nature, as by these qualities it is well fitted to correct and restrain the propensities to spontaneous and putrid fermentations.

secondary or ternary link in the chain of cause and effect, and always a sanative effort of the system, as well as a favourable symptom of the disease." Then, again, the absence of bile, in the first passages, has been brought forward as a cause of Epidemic Cholera; but how often do we see in cases of jaundice, when for weeks together the flow of bile into the duodenum is interrupted, yet no such affection takes place? The bile, then, beginning to be poured out on such occasions, being allowed to be a desirable feature of the disorder, why might not bile be administered like any other medicine, should the magnesia not have put an end to the vomiting? We are well assured that the physicians on the Continent have often recourse to it with the happiest effects, particularly in some of those affections which young women are subject to, such as Chlorosis Chorea, &c.; finding it gently tonic from its bitter quality, and at the same time aperient. Nay, we know further, that the Hindoos of Lower India prescribe for the Cholera Morbus



*kóróshanum* (Tam), which is a biliary concretion found in the gall bladder of bullocks in India; its Sanscrit name is *goracháná*: it is a favourite medicine, and is considered as cordial and alexipharmic. I should give a preference to the bile of a calf or an ox, as by calcination it would appear that the same salts are obtained from those which we find in the human bile; or in situations where calf-bile or ox-bile could not be procured, a mixture might be prepared to resemble it, as nearly as possible, in its natural qualities, by combining the various articles (38) which are known to constitute bile; or something of almost similar virtues might be composed, such as a solution of aloes in boiling water, to which is added a little

(38) It must be allowed, indeed, that *picromel* could not be procured, and that is the characteristic substance of bile; it resembles inspissated bile, is of a greenish colour, is intensely bitter, and has the absence of azote for its peculiarity. The first who obtained it from bile was *Thenard*. Mr. Brande says the process for procuring it is complex, and that he is doubtful whether it is a *product* or an *educt*.—See Manual of Chemistry, vol. iii. p. 186.

powdered Colomba root and a small portion of rhubarb. What there may be in bile, beyond its bitter and antiseptic qualities, to enable it to allay vomiting in such cases, it may be difficult to say ; thus far is ascertained, that all the acids render it turbid, and separate from it a substance which has many of the properties of albumen. As vomiting and purging, and bile, when it does appear, can be considered as no other than symptoms of the general disease, so also are the spasms ; but they are symptoms of a much more alarming nature, and seem to be induced by the morbid irritation excited by the frequent and painful exertion from vomiting. When they are present to a violent degree, they never fail to indicate a dangerous attack : being not only most exhausting in themselves, but, from constricting the mouths of the biliary ducts, are but too apt to prevent the flow of that fluid, which has been declared to be salutary. We see, however, as noticed in another part of this letter, that on some occasions, so powerful, so directly destruc-

tive of human life, is the great remote cause, and so rapid the sinking of the vital energy, that neither vomiting nor purging, nor bile nor spasms appear; but the patients expire in the course of a few hours, in spite of every effort to save them.

Mr. Scot, at page 51 of his Report, remarks the analogy that seems to exist betwixt the symptoms of the epidemic Cholera and those produced by certain vegetable poisons, such as that of the *antiar* and *tshettik* (39); particularly

(39) For an interesting account of those two poisons, the reader is referred to Mr. Crauford's valuable History of the Indian Archipelago (vol. i. page 467). The *antiar*, or what the Malays call *jyoh*, is one of the largest forest trees of the Archipelago; the poison or upas is in the outer bark, whence it flows, when that is wounded, in the form of a milk-white sap. The tree is common in every country of the Archipelago. The *tshettik* is a large creeping shrub; it is the bark of its root which affords the *upas* or poison: the shrub is confined to Java; its poison is much more intense than that of the *antiar*. The poison of the last-mentioned, inserted by means of a dart, kills a buffalo in little more than two hours; that of the *tshettik* in much shorter time. It would seem that botanists have lately bestowed on the *antiar* the appellation of *antiaris toxi-*

the first, which in its effects approaches, he says, the most closely of all the poisons of this class to the Cholera ; and this gentleman's opinion, I perceive, is confirmed by that of Dr. Horsfield, who judged from actual experience while in Java, where the poison is produced. " Whilst," he observes, " the narcotic influence of the *tshettik* was directly upon the brain and nervous system, that of the *antiar* operated chiefly on the stomach (40) and bowels. (41) Mr. Scot, while he has with great candour questioned the

*caria* ; and on the *tshettik* that of *cerbera oppositifolia*. I perceive, however, that Orfila refers the last to the genus *strychnos*.—See his work, vol. ii. part 1, page 308.

(40) See Dr. Horsfield's account of the *upas* poison, in the Transactions of the Batavian Society, vol. vii.

(41) The *upas tshettik* and *upas antiar* have both been carefully analyzed by Pelletier and Carventon ; the active ingredient of the first appears to be *strychnia* united to *igasuric* acid, and two colouring matters ; the latter substance is composed of a peculiar elastic resin, a gummy principle, and a bitter ingredient, concentrating in itself all the noxious qualities of the poison.—See his Ann. de Chem. et de Physic, Mai, 1824.

probability of Mr. Orton's remote cause, has not ventured to say any thing decidedly on the subject from himself, but remarks generally (page 52), " that Cholera is a disease endemical  
" to a hot climate ; that it is under the influence  
" of a climate of that description that the human  
" body is disposed to fall into the morbid action  
" which constitutes Cholera. What that influence is, or how it should be liable to change,  
" so that at one period the disease is scarcely  
" known, and at another it spreads like an epidemic, we are entirely ignorant. The disease  
" is natural to India ; and its late prevalence is  
" no more a proper subject of surprise than its  
" long preceding absence. We can form no rational conjecture how the morbid state of the  
" brain and nerves, which is supposed to constitute the proximate cause of Cholera, can  
" arise without the intervention of an external  
" exciting cause, though we are not warranted  
" to conclude that this is impossible." And then again, at page 61 of his Report, he says :



“ Cholera is a very dangerous disease, and so  
“ many circumstances occur in aggravation of  
“ its natural fatality, *that we can scarcely hope*  
“ *that any mode of treatment well can be devised,*  
“ *which will strip it of its formidable character.*”

These are indeed most hopeless words !

To his Report Mr. Scot has subjoined an abstract of returns, deaths, &c. ; from which it appears, that amongst the troops of the Madras establishment of all descriptions, from the year 1818 to part of 1824, there were admitted with the disease 3,292 Europeans, of whom 756 died ; and 16,984 natives, of whom 4,213 died. These numbers, it must be remembered, are confined entirely to the military force, and have nothing to do with the great mass of the population.

Various modes of treating the Cholera have been pursued at different times, since the malady first showed itself as a decided epidemic in 1818. The chief reliance seems to have been on antispasmodics and stimulants, external as well as internal ; calomel, emetics, magnesia with

milk, the timely use of blisters to the head and feet, sinapisms to the abdomen, the nitric (42) acid given internally, warm embrocations, anodyne injections, and sand baths; changing the doses and repetitions according to circumstances. Mr. Scot has added to his publication several useful formulæ, (43) corresponding with the

(42) The nitric acid, I have been informed by my friend Dr. Gordon, had in some cases of Epidemic Cholera been administered with success; but this success must not be allowed to militate against the theory I have adopted, that the *gastric acid*, as it has been called, is a source of immediate mischief in the disease in question. This acid is altogether *sui generis*; and though to be corrected by antacids, it is a curious fact, that it is less likely to be produced by acid fruits and acescent vegetables than by made dishes and high-seasoned food, which but too often weaken the powers of the stomach, and, according to the ingenious experiments of M. Magendie, must thereby prevent the rapid absorption of fluids from the stomach, which is continually going on while that organ is in a healthy state.

(43) As a good sinapism for the stomach, he recommends powdered mustard-seed, half a pound; powdered capsicum and powdered ginger, of each a drachm, made into a cataplasim, with vinegar;

modes adopted; and also some instructions from a medical officer, whose name is not mentioned: this gentleman directs that the *first* thing to be done is to administer a draught consisting of tincture of opium and sulphuric ether, of each a drachm; if this is vomited, repeat every time, in ten minutes; half an hour after the vomiting has ceased, he gave the following bolus:—calomel, twelve grains; camphor, three grains; opium, one grain; oil of peppermint, two drops: if this was vomited up, it was repeated in half an hour. When there is no vomiting at all, he advises that the sufferer should take this draught: tincture of opium and sulphuric ether, of each half a drachm;

to which is added two ounces of oil of turpentine. The following he recommends as an antispasmodic mixture: camphor mixture, one pound; laudanum, six drachms; aromatic powder, three drachms; *mix*: of this two ounces are a full dose. As an antispasmodic draught, he ordered brandy, an ounce; water, an ounce and a half; tincture of opium, fifty drops; tincture of capsicum, two drachms; *mix*. As a stimulant draught, he gave powdered capsicum, a scruple; powdered pepper, two scruples; water, two ounces; *mix*.

ipecacuanha wine, half an ounce ; water, two ounces, *mix*. And after that is vomited he prescribes this bolus : calomel, twelve grains ; extract of jalap, four grains ; camphor, three grains ; opium, one grain ; oil of peppermint, two drops ; *mix* ; and if this produced no effect, the draught was to be repeated after forty minutes. Amongst other remedies recommended by Mr. Scot, he mentions a blister for the abdomen, prepared with boiling water, as often proving beneficial in critical cases ; a fact which I can easily conceive, as in this way a blister (44) is raised at once.

For some time past the medical men of the East, having found, from the frequency of death from Cholera, even when the patients had been attended to with the greatest care, that some other plan must be adopted, have had recourse

(44) A useful blister has also been prepared with the nitric acid, as was experienced by Mr. Powell, of the Bombay establishment.—See Chisholm's Manual of the Climate and Diseases of Tropical Countries, page 85.

to bleeding, and in many instances with good effects. Mr. Corbyn says, that while he gave to natives fifteen grains of calomel, washing it down with sixty drops of laudanum and twenty drops of oil of peppermint, in two ounces of water, he would strongly recommend, that in treating the malady in Europeans, copious bleeding should not be omitted; and never less than twenty grains of calomel and twenty drops (45) of oil of peppermint, in two ounces of water, be administered. On the spasms attacking the abdomen, he recommends a blister to the part; should the blister fail in drawing, and the blood not flow from the veins, he says the patient should be put into a warm bath; when the vomiting and purging are incessant, he gave, without hesitation, eighty drops of laudanum, with twenty drops of oil of peppermint, and

(45) See Reports of the Epidemic Cholera which has raged throughout Hindostan since 1817, and published at Bombay, page 4 of Appendix.



twenty grains of calomel, injecting at the same time forty drops of laudanum in rice water, by *enema*. Of bleeding, Mr. Scot observes, "it was first thought of in cases where there was much spasm, consequently much re-action. On such occasions the relief was obvious and immediate, and the practice was in consequence established. Much has been said for it," he adds, "and much against it. The advocates for it, allege that nothing less than thirty ounces taken away will do good; when those who are against it declare, that if the circulation is in a state to stand such a depletion, the case must have been mild, and the patient would have got over it at any rate;" concluding by observing, "it must be confessed that fatal collapse suddenly following large bleedings, has lately staggered the faith of many practitioners." It is but too true, then, that this appalling distemper still continues, in numerous instances, to baffle the best skill of many able and humane men; one of whom, who has lately returned from India, Mr. Goldie, late

member of the Medical Board of Madras, has just informed me that he had witnessed several cases when bleeding freely at the commencement of the disease, by relieving internal congestion, had no doubt saved the patients ; but, alas ! he added, that in others it did no good ; and that, with regard to the large doses of calomel which have been so much vaunted, he had occasion but too often to observe that that powerful mineral, in severe attacks, not unusually lay in the stomach altogether inert ! ! (46)

(46) The large doses of calomel lately given in India for the Cholera, seem to have been first liberally used by Mr. Corbyn, from a notion which he had adopted, that although this mineral, in the quantity of from five grains to eight, operated as a *stimulant*, in larger portions, such as twenty grains, it was a *sedative*.—See Bombay Report on the Cholera, Appendix, page 3. He does not appear, however, to have made a convert to this opinion of Mr. W. Scot : on the contrary, that accurate observer says, that the success of those who used calomel in large doses was not greater than that of those who did not ; and that when it had been given to great extent, it had been found, after death, coating the internal surface of

the

If Mr. Scot's words were hopeless, these are, it must be confessed, but little more encouraging.

Before noticing the medicines which are in use amongst the natives of eastern countries in cases of Cholera, and which will conclude this, I fear, already too long letter, give me leave, Honourable Sirs, briefly to recapitulate the notions I have been induced to entertain respecting the malady in question; and as briefly to state, under one view, the plan I should hope might be found at least worthy of a trial, with a view of mitigating its severity.

It having been then granted that the epidemic Cholera is but the Cholera Morbus in its most severe form, and my having fully ascertained that, in ninety-nine cases of a hundred, the cure for that was simply an antacid, and that the best was calcined magnesia; I should with great

the stomach, lying embedded in greenish mucus, marks of INFLAMMATION being visible on the spot (see Mr. Scot's Report, page 57): consequently, acting like any thing but a sedative; perhaps rather by its actual weight and pressure.

confidence order it at once, in the more serious affection, in a full dose, but in tepid water, *not* milk, and also by *enema* in barley water; previously, however, having recommended a purgative injection, from a conviction that nothing contributes so much to relieve the stomach as what gives a tendency downwards to offending matter. Should the magnesia be rejected, I would instantly repeat it, and with it a good portion of powdered ginger or black pepper; and then, fearing the case likely to become extreme, I should order a small blister to the inside of the lower part of each leg, to keep up as much as possible the *vis vitæ* in the extremities. Supposing, however, but which I never experienced in the sporadic disease, that the magnesia came up again and again, I should look for the flow of bile (which the violent straining often excites) as a something that might come to my aid; and, in promoting this, I have frequently found hard rubbing with the hand upon the region of the liver prove successful. If also

here disappointed, I should (still considering the cause of the vomiting to be of an acid nature, and such a one as must not be shut up by an opiate) have recourse to some other antacid ; for surely we may question the policy of closing the gates of the garrison, whilst the enemy still storms within. I cannot but express a regret that more (47) had not been done to ascertain,

(47) I can find but one solitary instance of any examination of this kind having been made ; and that was by the intelligent Dr. P. Scot, of the Madras establishment, as is noticed in Mr. W. Scot's Report, page 58. It was in a case that terminated favourably, when nothing had been given internally but magnesia and milk ; he says he discovered no acid in the discharges, so was at a loss to imagine how the medicine could have cured the disease, but supposed the bland nature of the milk must have allayed the acrimony, and so put a stop to the vomiting. No ! it was the antacid, the magnesia that was in this case sanative. I am of opinion that the fluid vomited up on such occasions somewhat resembles what is eructated in *Cardialgia Sputatoria*, which in certain instances is much less marked by an acid than in others : this is a disease Dr. Good believes may probably owe its existence to a peculiar



by chemical analysis, what was the peculiar nature of the fluid vomited up ; for to be told that it is greenish, or turbid, or whitish, can avail us nothing. Should the administration of antacids succeed in stopping the vomiting, little more will be necessary than next morning to carry off what bile may have been stirred up by some purgative medicine—such as the compound colocynth pill with a little calomel ; and if any opiate is given to sooth, after all the offending matter is worked off, it ought to be of the gentlest kind, caution being used that no food is taken for some days of a nature at all likely to renew the irritation of the stomach. Weak, well prepared coffee, without milk, with

peculiar inactivity of the proper absorbents of the stomach. It may have been a case in which the acid principle was much diluted, that Mr. P. Scot alludes to, so not easily detected ; for true it is, in complaints of this nature, to use the words of the enlightened author just named, “ The existence of an acrimony from *acidity* seems to be common to all its varieties.”—See Dr. Good’s study of Medicine, vol. i. page 125 ; also, 123 and 126.

a little toasted bread, I found the safest diet on such occasions. Nay, I have had reason, in more cases than one, to think that coffee so prepared had peculiar virtues in checking vomiting ; and we shall by and bye see that the inhabitants of Luconia take it with this view (48). If, in spite of all I had done, the vomiting still continued, and that it appeared from what was passed by stool, that no bile flowed into the duodenum, owing, perhaps, to the severity of the spasms constricting the mouths of the biliary ducts ; I should try what could be done by giving either half an ounce or an ounce of calf's bile, or that of the ox a little diluted, and repeating the dose if necessary ; or, if neither of these could be got, by administering the aloetic mixture already mentioned. Then, indeed, if all these means failed me, and the disease was evidently not to be got under by the method I had pursued ; I should conclude that the great remote cause

(48) Weak, well-prepared pepper water, with a little toasted bread, may be safely taken, or ginger tea made not too strong.

was too powerful for the weapons I had used against it ; or if, in the first instance, so direct and overpowering was the morbid influence, that neither vomiting nor spasms were present, I should have recourse at once to galvanism, to supply the deficiency of nervous influence in the sinking frame. This should be, without loss of time, directed (49) by some skilful hand to the region of the stomach, brain, liver, and heart, and to be continued as long as circumstances might render it necessary. But with regard to the last organ, as it would appear from Dr. W. Philip's earliest experiments that the circulation of the blood was, in a great measure, *independent* of the nervous influence, and therefore not so likely to be acted on by galvanism as the

(49) In Aldini's mode of applying galvanism he requires no incision to be made in the integuments, but that the patient should be simply laid on a sofa, and covered with the clothes.— See Aldini's General Views of Galvanism to Medical Purposes, pages 55 and 56.

other part, there might be no harm in ordering the patient, at the same time, to inhale oxygen gas, which has been proved to be a powerful supporter of respiration and animal life. Together with these, yet questionable remedies, others of a minor nature might with advantage be resorted to ; such as warmth, sinapisms, stimulating embrocations, &c. If disappointed, however, and it is by no means impossible, in realizing the hopes which I had entertained of being able either to put a stop to the vomiting and purging by the means I have proposed ; or, in more serious cases, to renovate the sinking energies of the frame by the use of the most powerful agent that has hitherto been proposed, I should then, in perfect accordance with Mr. Scot in the sentiments he has expressed, however despairingly, recommend a judicious selection from those medicines and means which the zeal, talent, and industry of the different medical officers now in India have put the public in possession

of (50): a body of men who have been eloquently enlogized by a distinguished writer, by one who cannot be accused of being lavish of commendation where he does not conceive it to be justly due, and whose creed we beleve to be, and it is the best,—that, in the present state of science in England, infinitely more good is to be done by a close and somewhat rigid examination, than by a flattering and less discriminating applause. If disappointed, I repeat, it will at least be admitted that little time could have been lost in giving a trial to the mode which I had suggested. In its failure I should but join the numerous band of those who have hitherto laboured in the same good cause : if, on the other hand, it shall be found

(50) I cannot here refrain from mentioning the good effects I have known derived from changing *situation* and *air*, at the very commencement of ardent remittant fever in India; and have heard of one instance in which Cholera had been checked by the same means : the gentleman had been taken ill over night, but made a powerful exertion, was carried on next morning with the army, and by a little care was in a few days quite well.



that I have had the good fortune to throw even one feeble ray amidst the gloom which has so long prevailed, the reward will be in my own breast, where nothing can ever be received with indifference which is at all connected with the prosperity and happiness of our Indian dominions.

It was observed by Arrian (in *Indicis* 15, sec. xii.) that the Indians had few diseases; and it was said by *Pliny* (51), as well as *Ctesias* (52), that they were remarkable for their longevity. With regard to the last peculiarity, it does not appear to hold good in these days. There are, no doubt, several maladies frequently met with in colder climes, from which the Hindoos are altogether exempt: others occur amongst them but seldom, such as typhus fever, consumption, and scarlatina anginosa. The small pox, before vaccination had become so generally adopted, was at times a most fatal infliction, though it

(51) *Hist. Nat. lib.* 7, cap. ii.

(52) In *Indices apud Photinum*, cap. xv.

ought not to have been so, as the Hindoos knew how to render it milder by inoculation, which was commonly practised in India many hundred years before it was thought of in Europe, and the operation performed by the *Tikkar Brahmins* by means of a pointed instrument. With regard to the measles, it would not appear that the ancients were acquainted with it. The first writer who notices it, is *Aaron*, a physician of Alexandria, who published in A.D. 622, and wrote in Syriac : the Arab writer, *Rhazes*, gives a full account of it in his work entitled "*Continent*." The measles, like small-pox, seems originally to have been brought from Arabia, and Arab physicians describe both under the same head. Hence it may be that the Hindoo doctors also reckon the one but as a variety of the other, calling the small-pox, *Perie Unmay*, or large *small-pox* ; and the other, *Chin Ummay*, or small *small-pox*. The measles is a much less dangerous disease in Hindoostan than in England, and commonly makes its appearance in December and January.

There are no well authenticated instances of the plague ever having reached our Indian shores ; indeed, I am inclined to believe, that if it ever does so, the scorching and purifying winds which prevail at certain seasons would soon put a stop to it, in the same manner as, by Sir Robert K. Porter's account, great cold arrests its progress at Constantinople (Travels in Persia, vol. i. p. 6.) The seat of this malady has been uniformly referred to Egypt, and it was supposed by Thucidides to have been imported from the borders of that country to Athens, where it first showed itself in 433, A.C. Into modern Europe it was no doubt introduced by means of the Crusades. Savary, however, in his "*Lettres sur l'Egypte*," says, that it was not in that territory, but at Smyrna that the disease originated. We read of it at Malta, in *Contaro's* description of that island in 1592 : we know it was at London in 1593. With regard to the farthest eastern point to which the plague has ever extended, it may be difficult to say with

precision. Russel treats of its ravages at Aleppo, which is in longitude  $37^{\circ} 25'$  E. : it has visited Moscow, which is in longitude  $37^{\circ} 31'$ , and almost depopulated Bussora and the neighbouring districts, which are in longitude  $57^{\circ}$  (53). Sir John Malcolm informs me that this dreadful scourge has been occasionally felt in the western tracts of Persia, seldom travelling farther east; and that a disorder much resembling it had at different times testified its malignity on the east bank of the Indus. Sir Robert K. Porter states (Travels in Persia, vol. i. p. 9) that the plague was most destructive at Edessa in 1812; and the same gentleman tells me, that in his recollection (thirteen years ago) it had been at *Teflis*, which is in longitude  $65^{\circ}$  E.; and, about two hundred and fifty years ago, at *Tabreez*, when that city was in the hands of the Turks. Nay, we learn from M.

(53) The Arabs are but too well acquainted with the plague, though it is said seldom to reach to the interior of their country : they give it the names of *Taoun* طاعون and *Huba* وبا .

de Guignes, in his "Voyages à Pekin, Manille et l'Isle de France," (page 329), that in the year 1503 this infliction was as far east as the southern provinces of China, where it is called by the natives, *Ouen-pen*.

I have said that India is exempt from the plague: it would be happy for those dominions were such also the case with regard to leprous affections, which are there both frequent and frightful.

Epidemic fevers have occasionally, I presume, in all ages, proved most destructive in our eastern territories. A disease of this nature is alluded to by Orme, in his history of Hindostan, as taking place, we believe, in consequence of the great irregularity of the seasons in 1757 (see his History, vol. ii, page 201.) ; and to a similar cause did we trace that which prevailed in Southern India in 1809, 1810, and 1811. But let me now recur to our more immediate object, which I do by observing, that in the medical works of the Hindoos (and these are



very numerous) there are various disorders distinguished by violent vomiting, purging, sinking of the powers of life, &c., &c., so that it is difficult altogether to ascertain which may be considered as the real Cholera Morbus. It appears, by a letter in the Madras Courier, mentioned by Mr. Scot, to be treated of in the *Chintamoney* (54) of Durmuntrie under the names of *Vidhuma Vishuchi*, and *Stanga*; for it is ordered a complex prescription, termed *Amanda Rasa B'hairavum*, which, amongst other ingredients, contains sulphur, mercury and soda. I find it fully described in a *Tamool Sastrum* called *Vytia Anyouroo*, composed by *Aghastier*, in *Yel-lacannum* (poetry): it is there named in *Tamool*, *Sartikunnum*, and is said to come on with

(54) I found however, on referring to a list of Sanscrit Medical Works in my possession, that the *Chintamoney* is ascribed to an author named *Govindachary*, and not to *Durmuntrie*: this last wrote the celebrated *Curma Candum* in Sanscrit, and which *Aghastier* afterwards translated into high *Tamool*; it treats of those maladies which are inflicted on mankind on account of their vices and follies.

“ giddiness and coldness of the extremities, which symptoms are soon followed by excessive vomiting, which nothing can stop ; to this succeeds a feeling of burning in the epigastric region, great prostration of strength, and frequently a copious discharge of bile.”

In this way, I presume, a favourable case is meant to be described, as the account concludes, not with death, but the flow of bile, a fact which is so much additional testimony in favour of Dr. J. Johnston’s assumption, that, on such occasions, the appearance of bile is positively sanative. In other parts of the same *Sastrum*, Cholera would appear to be noticed under the name of *Vandie*. In a medical work written by *Tunmundrie*, in Sanscrit, and which is held in high estimation by the Hindoos, the disease is termed *Ennerum Vandie*, which literally signifies *vomiting and purging*. The following prescription for Cholera is taken from that work.

Take of the hairy portion of the stem of the *Shàdàmùngie* (Tam.), which is the *Cyperus*

stoloniferus of Kœnig, five pagodas weight ; root of the *Tuvmaray*, which is in the *Nelumbium speciosum* of Jussieu, one pagoda weight ; *Vungāyūm*, which is *Allium cepa*, fifty pagodas weight ; *Shemboogha poo* (flowers of the *Miche- lia champacca* of Linnæus), four and a half pagodas weight ; *Kórashànūm* (biliary concretion found in the gall-bladder of a cow), two and a half pagodas weight ; *Eloopei poo* (flowers of the *Bassia longifolia* of Linnæus), three and a half pagodas weight ; *Vaypum poo* (flowers of the *Melia azadirachta*), four pagodas weight ; *Yay- lersie* (Cardamoms), three pagodas weight. Grind all the foregoing articles with fifty pagodas weight of *Vullay Kàrumboo Chaur* (juice of the white sugar-cane), add twenty pagodas weight of *Molei paul* (woman's milk) ; put the whole in an iron pot, and boil to a proper consistence ; then form it into boluses, each about the size of a *Choonday Kài* (fruit of the *Solanum pubescens*) ; one of these is to be taken in the morning, and one in the evening, dissolved in a

little warm water, and so continued till a cure is performed.

The Cholera is very common on the Malabar coast, where it is termed *Nirtiripa*, in the Malealic language. The Gentoos bestow on it the appellation of *Vantie*; by the Mahometans of Lower India it is designated *Dank Lugna*; its Hindoostanic name is Murghee (death); its Mahratta name is *Tural*, also *Morshee*. The Brahminical Doctors of Lower India speak of it under the appellation of *Chirdie Rogum*, but its proper Sanscrit name in Upper Hindostan, is श्वेतरस *Swétārāsā* (55), and hence the corrupted Hindoostanic term of *Seet-rus* سيترس. The Arabians call it *El-Houwa* الهوا, which literally implies that it is in the air; they also call it the Indian plague, according to Dr. Rheman (56), in his *Account of the Progress*

(55) Which Dr. C. Wilkins informs me may mean white fluid.

(56) See Edinburgh Medical and Surgical Journal for January, 1825, pages 222 and 223.

of the Cholera Morbus from India to the Mediterranean and Caspian Seas. There is a tradition in Arabia (57), that this very disease, about five hundred years ago, originated in India, extended itself over Egypt, Nubia, and Abyssinia, and finally disappeared in the deserts of Africa. Other Arabic names for the disorder are *تيو* *انباع دراع* and *Hayzét هيصت*, by which last it is also commonly known to the Persians (58), whose country it appears first to have reached (Schiraz) in the month of August 1821; they prescribe for it powdered bezoar, in conjunction with a small quantity of black pepper

(57) The reader may find the notions of the Arabian Physicians regarding Cholera, in a work entitled "Tuzkerry Tuswiedi" *تذكرة تسويدي*, written by Mohammed Ishak.

(58) The Persian works in which some account of Cholera Morbus may be found, are entitled *معدن شفا Madeni Shefa*, written by Aby Ben Hussein of Bokhara, in A. D. 1364, and *راحت ال نسان Rahet al Insan*, written by Abdal Cuvvy Ben Shehad, in A. D. 1376.



in powder and a little water, with the greatest success; a fact I find also noticed in the Asiatic Journal for November 1818. Which of the bezoars it is I cannot say; perhaps that known to the Arabs of the desert as *Hejir Atis*, هجر ايس which literally means *goat's stone*, and which consists almost entirely of phosphate of ammonia and magnesia: another variety of bezoar the Arabs term *Fuduj* فودج.

The Malays prescribe for the Cholera Morbus, coffee; a lesson which they in all probability learnt from the natives of Manilla, who use it continually for that complaint, and I understand successfully: it is also a curious fact, that the Roman physicians were in the habit of ordering for it a kind of coffee, prepared with torrified lentils (59). The Malays often speak of the disease under the title of *Moontaan* مونتان, signifying vomiting, and which we believe to be, properly speaking, a Javanese word.

(59) See Pliny's Natural History, book 22d, chap. 25.

In a former part of this letter I noticed the vast range of territory over which the Cholera had extended its ravages. It would appear that the Russian dominions had been first assailed by it in June 1823, at the same period that it broke out in the environs of Laodicæa, and about Antioch. The Chinese have bestowed on it various epithets expressive of its dangerous nature ; that in common use is *Ho-lwan*, and it is supposed by them to be occasioned by eating *seen jow tae tsing sin* (60), which signifies the fresh seeds of the water-lily, when the centre of them is blue.

Dr. Rehman, already quoted, finishes his very interesting memoir on the progress of the Epidemic Cholera by these remarkable words:—" It has passed over 90° of longitude and 66° latitude. The Philippine Islands form the eastern, and the borders of Syria the north-western, limits of this disease. The Mauritius (as far as is known) is the most southern, and Astracan the most

(60) See Morrison's Dictionary of the Chinese Language, article Cholera.

northern point to which, up to the present time, it has extended. Thus has it, in one direction, crossed the equator and approached the boundary of the southern tropics ; and, in another, passed through the northern tropic into the temperate zone." But, with all this, it does not appear that in any instance the disease proved contagious. (61)

(61) This is no place to enter at length upon the question of contagion, which has lately elicited so much discussion among the statesmen and faculty of the British empire ; a discussion, too, which seems likely soon to lead to some important changes in our quarantine laws ; alterations which, if made, will, I hope and trust, come to us guarded with all that caution so momentous a subject demands. Two diseases, for ages considered as contagious, are now by many no longer supposed to be so—the plague and yellow fever ; and certainly Dr. Maclean and several others, who advocate this doctrine, have brought forward very cogent reasons in support of it ; but by far the most eloquent and able writer in defence of the new theory is the author of an article in the *Westminster Review* for January 1825 (page 134). I have never seen a case of plague nor yellow fever—for, thanks to Heaven ! India has hitherto remained exempt from both ; but typhus fever I have there met with, and can safely state this much respecting it.—In Hindostan, as in all tropical regions, owing to the great desire there is for cool air, the

Permit me, Honourable Sirs, to apologize for having so long obtruded on your time ; and, in the sincere hope that an early communication

wards and sick rooms in hospitals are kept continually exposed to its free current from without, by means of open windows and verandas, so that the circle of contagion is very limited ; consequently before a typhus fever could be caught, the sound person must be in close contact with the sick. Hence it is, that patients in the same apartment with the sufferers, but at the distance of five or six feet from them, escape ; while the comrades of the infected who had undertaken the charitable office of washing them, feeding them, and turning them in bed, are but too often attacked by the disorder—the natural consequence of inhaling into their lungs the morbid effluvia, that noxious leaven (if I may so call it), which is at once the offspring and the reproducing source of the malignant malady. In this way I lost several fine young men, till I adopted the plan of making them take daily, during the time that they were so humanely employed, a certain quantity of strong decoction of bark, and eating liberally of ripe oranges, by which means I put a stop to the contagion. I shall only further observe, that I have known two instances of healthy men becoming actually consumptive, from sleeping in the same bed with their wives, while they were labouring under *phthisis pulmonalis* ; and, in more diseases than I shall here enumerate, I should at all times fear the worst from breathing the air, on its immediately proceeding from infected lungs.

from the East may bring the pleasing intelligence, that the dreadful Hydra we so strongly deprecate has at length fled, and that peace, that best of all blessings, has crowned our victorious arms,

Allow me to subscribe myself,

Honourable Sirs,

Your obedient

And most faithful Servant,

WHITELAW AINSLIE, M.D.

February 12, 1825.

39, York-place, Portman-square.



## POSTSCRIPT.

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SINCE writing the foregoing observations, I have learned that the Cholera had made its appearance in some of the Italian States. This I am inclined to doubt; but that it has shown its frightful aspect in Syria, I can well believe. In 1820 it raged at Luconia; in Siam, in the Birman empire, it was so destructive in 1821, that in the capital alone, *Bancok*, 40,000 souls perished. In less than two years it is said to have carried off half a million of people in Java. At *Tabriz* in Persia, in 1822, 4,800 inhabitants died of it in twenty-five days; and it was almost equally severe at Cochin-China about the same period. Whatever may be finally found to be the great remote cause of this malady—whatever

the best remedy for it—that it may never reach the shores of our dear native land, is the anxious prayer of,

Honourable Sirs,

Your most obedient Servant,

W. AINSLIE, M.D.

*March 25, 1825.*

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